

# small air forces observer

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April 2008

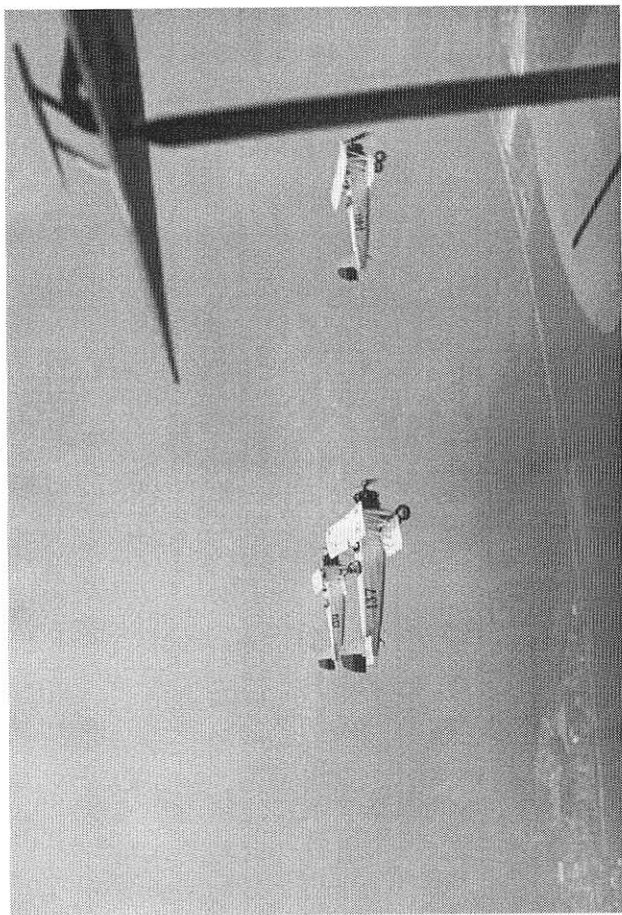
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**Estonian Letov Š-228E**  
**Mexican Kingfishers**  
**Greek L-5 Sentinel**

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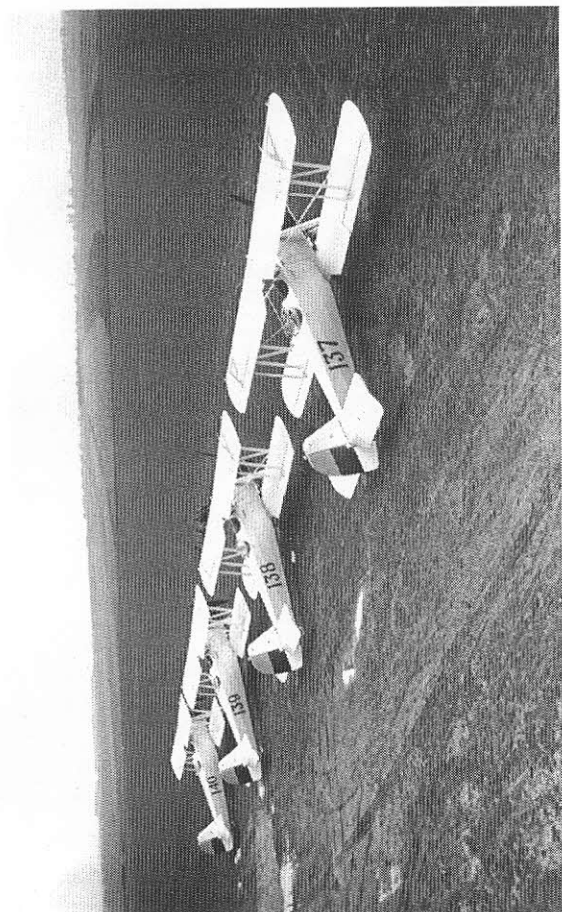
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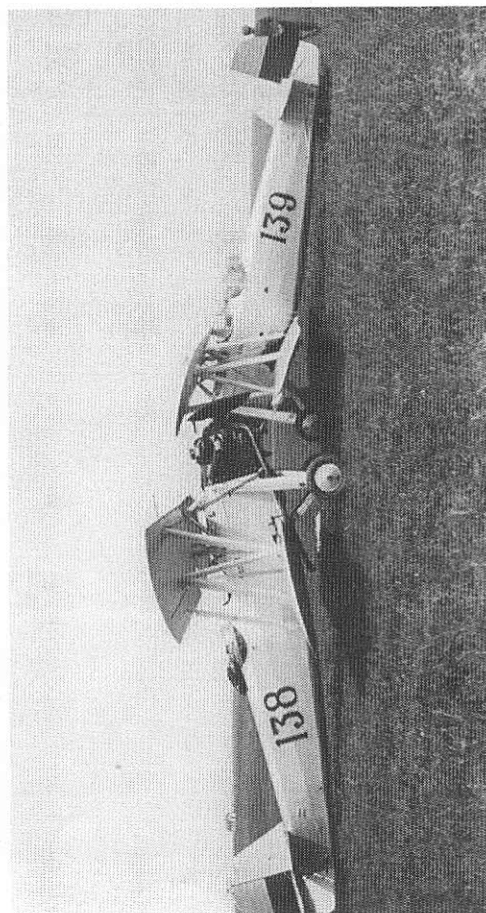
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# SMALL AIR FORCES OBSERVER

## The Journal of the Small Air Forces Clearing House

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**SAFO EDITORIAL POLICY:** The purpose of the Small Air Forces Clearinghouse (SAFCH) is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. The results of this research are published in our quarterly journal, the Small Air Forces Observer (SAFO). Articles published in SAFO can be reprinted provided permission of the author is obtained and the SAFO is identified in the reprint.

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**SAFCH WEB SITES:** Our new website <[www.safch.org](http://www.safch.org)> is just about ready to take off. On this site you will be able to see, in color, those photos that had to be printed in SAFO in black and white. You will also be able to chat with other members. Also, see our Small Air Force IPMS/USA Special Interest Group (SIG) web site at

<<http://hometown.aol.com/rotorfrank/SmallAirForce.html>> for photos of models by the members.

**EDITORIAL (1):** It's renewal time again. Enclosed with this issue is the renewal form. Please fill this out and return it as soon as possible so I can make plans for the July issue. Although the US Postal Service has scheduled another rate increase for May 2008, there is no change in the subscription rate for SAFO Vol. 32 (July 2008 to April 2009).

**EDITORIAL (2):** You may have noticed that the SAFCH Sales Service's list has not appeared in recent issues. This was because there have been so many good articles that needed to be published. However, the consequence of these missed lists was a steep decline in the number of orders received. This is embarrassing because there are new items continually being added to the list. As a compromise, I will reserve one page in each issue for a part of the list. Since this will not be enough for the entire list, each subsequent issue will cover another page of the list. The entire list can be requested either by e-mail or by sending \$1.00 (or equivalent to the editorial office). In an attempt to move the older items (some of the kits have been around so long that they are becoming collector's items), all items are on sale at 20% off except those marked with the \*\*\*.

**COVER COMMENTS:** The Estonian Letov Š-228E on the cover serves to introduce the feature article in this issue. This article is the English "summary" for a book that will soon be published in the Czech Republic. It was written as a cooperation between a Czech and Estonian aviation historian. The book/article is much more than the history of the Š-228E in Estonian service, but it also provides detailed information on the organization and history of Estonian military aviation from 1932 to 1940. This information corrects and expands on the little that has been published in the English literature on this subject.

## AUSTRALIA

**AUSTRALIAN PLASTIC MODELLERS ASSOCIATION (APMA)**, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$40. International payment is best handled via Paypal at [iansharyn@bigpond.com.au](mailto:iansharyn@bigpond.com.au). Web Site: [www.apma.org](http://www.apma.org).

**4-07** (28 pages) "Bankstown 1948" 6 pages with 12 photos [RAAF Beaufighter, Mosquito, Catalina (2), Firefly (2), Lancatran (2), & Sea Fury (2)]. Non aviation articles are: "M1 Abrams in AUSCAM" and "Sherman Colours in the Middle East". [Ed: This is probably the last enthusiast magazine to go to a color cover. Should SAFO go this path even if it means an increase in the subscription? APMA subscription is A\$40.00 (US\$36.80)]

## AUSTRIA

**ÖFH NACHRICHTEN** (Oesterreichische Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.)

**4/07** (40 pages) "Eurofighter gelandet" 2 pages on Austria's first Typhoon '7LoWA' including 2 color and 4 b&w photos. "Lloyd C-Flugzeuge" 4 pages including 6 small 3-view drawings of C IV (4) and C V (2), 7 photos, and a long section on Lloyd C IV and C V in Poland (with 4 photos). "Oberst Stephan Petrůczy v. Petrůcz" 4 pages including 6 photos (one of the PKZ-2 captive helicopter built in WWI by Petrůczy, von Karman, and Zurovec). "OeLAG Junkers Ju 52: 1935-1945" 7 pages on Austrian civil Ju 52 including 19 photos. "40 Jahre Hubschraubergeschwader" 3 pages on Austrian helicopters including 4 b&w and 2 color photos.

## CANADA

**RANDOM THOUGHTS** (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US \$24.00 in US \$26.00 elsewhere).

**30/3** (24 pages) "A Tale of Two Canadian Sea Kings" 7 pages on building a couple of 1/48-scale Hasagawa Sea Kings including 12 photos (2 in color) of the completed models. "IPMS Memphis Classic Airframes Kit Contest" 8 pages with 16 photos (5 in color) of the winning models (including a Finnish Buffalo). Non-aviation articles are: "HMS Puncher 1944: A Conversion in 1/700 Scale" and Building Bandai's Classic 1/1000 Arcadia".

## FINLAND

**MALLARI** (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, no check accepted due to the high redemption costs). Text in Finnish.

**4/2007 #168** (20 pages) "Bell P-400 Aircobra" 2 pages on building the 1/48 Hasegawa kit including 3 photos. "Aero Oy Dragon Rapide" 1/2 page with 5 profile drawings. "P-39N Airacobra" 3 pages on building the 1/48 Eduard kit including 12 photos. Non aviation articles include "M3 Half Track 'White'" 5 pages including 20 photos of vehicles in Finland with some weird variations and 1/72 and 1/35 scale drawings.

**5.2007 #169** (28 pages) "Falklandien Sea Harrier FRS.1 (Osa 1)" 3-page review of available kits with 6 photos. "IPMS-Finland Open" 14 pages with 125 color photos. PaK-Stuart" 3 pages on building a Yugoslav Stuart with PaK 40 gun including 7 photos.

## SUOMEN

**ILMAILUHISTORIALLINEN LEHTI** (Pentti Manninen, Jakomaentie 8 b C 300, 00770 Helsinki. Subscription: Europe 26 euro, elsewhere 32 euro, and 45 USD. Payment by International Postal Order or in cash notes; no (cheques not accepted because of high redemption rates). Each issue includes a 2-page English summary.

**4/2007** (24 pages) "Plywood and Aircraft-Grade Plywood" 5 pages on making aircraft-grade plywood in Finland including 6 photos. "PZL-102B Kos in Finland" 3 pages including one photo and a scale 3-view drawing. "The Story behind the Photo" one page with the story behind the photo of 8 IVL A.22 at Santahamina Air Station taken on 23 July 1932. "DH 60X Moth MO-100" 3 pages including 2 photos, a scale 3-view drawing, and drawings of the color schemes for MO-100 & MO-102. "Høver MF.11 Kalle from Norway: Part 2" 2 pages including 3 photos. "W/O Hämelän and his lone victory on .26.6.1941" 2 pages including 2 photos and a side profile of his I-153 'VH-4'. VKT 12.70 LKk/42 - no copy of Colt (Part 1)" 4 pages on Finnish efforts to obtain a heavy machine gun for their aircraft including 4 photos of a/c machine guns.

**1/2008** (24 pages) "Aero Oy Aviation Power Plant Repair Works 1941-1944" 6 pages including 8 photos. "MiG-3" 4 pages including 2 photos, 2 construction sketches, and 2 graphs comparing the Brewster 239, MiG-3 & Bf 109 rate of climb and maximum level speed. (The

Brewster comes out a poor third on both measures.) I was surprised to learn that the FAF had ordered 22 MiG-3 from Germany, but they were destroyed in an ai raid before delivery. Serial MG-71 to MG-913 had been reserved for them. "MiG-3 Side Story" 3 pages on two MiG-3 that crashed inside Finland including 4 photos and two 3-view drawings. "The Story Behind the Photo" one pages including one photo. This is a great subject for the modeler searching for a compact diorama. The photo shows the fuselage of the Valmet Vinka prototype LEKO-70 mounted on a sled powered by a P&W J-57 jet engine for ejection-seat tests. "The First national Insignia of the Finnish Air Force (Part 1)" 3 pages on the markings applied to Count von Rosen's Thulin Type D including 2 photos and 3 drawings. You'll be as surprised as I was to learn 'No law or presidential statute said anything about the Finnish aircraft emblem until 1945.' "VKT 12.70 LKk/42: No Copy of Colt (Part 2)" 2 pages including on sketch and one photo. "Hover MF.11: Kalle from Norway (Part 3)" 2 pages on aircraft's flying qualities including one photo.

## FRANCE

**AIR MAGAZINE**, TMA, 75 rue Claude Decaen, 75012 Paris, France. Six issues a year. 35 euros in France, 41 euros in Europe, and 50 euros for the rest of the world. Payment by Visa, Eurocard, Mastercard. E-mail: [airmagazine@wanadoo.fr](mailto:airmagazine@wanadoo.fr).

**No. 39 Nov./Dec. 2007** (72 pages) "La Guerre de Leticia" 18 pages on the conflict between Colombia and Peru a god-forsaken piece of the Amazon including 35 photos, one map, and 11 color profile drawings [Peru: Curtiss Falcon and Hawk II (2); Douglas O-38P; Colombia: Curtiss Falcon (3), Hawk II (2), and Ju 52/3m (2)]. "James Robertson Porter" 5 pages including "Patent" drawings for three early (1912, 1923, & 1933) VTOL machines. Le Caproni Bergamaschi 135 en service au Perou" a one page addition to the article in #138 with 3 photos. "Les bombardiers bimoteur sovietiques Yak-2 et Yak-4" 20 pages including 26 photos, a 2-page 1/72-scale drawing of the Yak-2, 2 color 3-view drawings (Yak-2 & Yak-4), and 9 color profile drawings [Samolt N°22, BB-22 (2), Yak-2 (3), & Yak-4 (3)]. [Ed: A very nice vacuform kit of the Yak-4 is available from the SAFCH Sales Service.] "Les Douglas 8A-3P 'Northrop' du Cuerpo Aeronautico Peruana" 10 pages including 12 photos, 2 color 2-view drawings, and 7 color profile



drawings. "Actualite Maquettes & Livres" 4 pages with reviews of 31 kits (including a 1/48-scale Lavasseur PL 101) and 8 books. **No. 40 Janvier/Fevrier 2008** (73 pages). "Premiers avions de combat modernes en Uruguay" 10 pages on the P-51 in Uruguay including 24 photos, table listing history of individual a/c, and color 4-view drawing. "10 juin 1944 objectif: La raffinerie 'Romano-Americana'" 25 pages including 50 photos, a map, 17 color profile drawing [Romanian: IAR-80 (4), IAR-38, Bf 109G, Fw 58, & IAR-27; USAAF: P-38J Lightning (6); Luftwaffe Bf 109G (2) & Bf 110G], and 9 color drawings of squadron badges. "Les Curtiss JN-2 'Jenny' espagnols" 10 pages including 22 photos and a 1/72-scale 3-view drawing. "Le Croisiere rose, un voyage au Sahara" 10 pages on a flight from Sidi-Ahmed, Tunisia, Timbuktu and back in 1934 including 10 photos, a map, and 2 color profile drawings (Potez 25). "Jean de Chappedelaine: la Gyraptere: une voiture volante sans ailes: 4 pages including 4 photos and a 3-view drawing of a 1928 'wingless' flying machine. "Actualite Maquettes & Livres" 4 pages with reviews of 11 kits and 26 books.

**AVIONS:** Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 50 euro for 6 issues).

**#161 Janvier/fevrier 2008** (72 pages) "Cahier Special: Le Dewoitine D.520 (1<sup>e</sup> partie, 1939-1940)" 23 pages including 33 photos (several rare contemporary color photos), color cover painting of a Vichy D.520 dueling with a USN F4F, 2 color 3-view drawings, and 10 color profile drawings. "Heinkel 177, La Forteresse Valante Allenmande (3<sup>e</sup> et derniere partie)" 21 pages including 45 photos and 6 color profile drawings (includes information and photos of Hs 293 and Fritz X standoff bombs). "Hiroyoshi Nishazawa: L'As Japonais que l'on surnommait le 'Diable'" 10 pages including 26 photos and 4 color profile drawings (A5m4, A6m2, RAAF P-40E, & USAAF P-39F). "Geotfried van Banfield: L'aigle de Trieste" 9 pages including 27 photos, one map, and 4 color profile drawings (Oeffag H, Hansa-Brandenburg CC & W 18, and Macchi M.5). "Les chasseurs francais en thaïlande, 1919-1939" pages including 19 photos (Nieuport 11, 17, 24, 29, & 81; and Spad 7 & 13), "Maquette: Nakajima Ki-43 III koh" 2 pages on building the 1/48 scale Finemolds kit including 8 photos of the completed model.

**#162 Mars/Avril 2008** (72 pages) "De la guerre d'Indochine a la guerre d'Algerie:

Le temoigne inedit d'un navigant sur 'Dakota'" 16 pages including 25 photos. "Cahier Special: Le Dewoitine D.520. (2<sup>e</sup> partie, de 1941 aux annees cinquanten)" 21 pages with 44 photos, 2 color 3-view drawings [one with invasion-like stripes (Sept. 1944) and one with black stripes on all top and side surfaces (1947)], and 7 color profile drawings [Vichy (6) and one with Cross of Lorraine]. "Les Stuka Italiens: 3<sup>e</sup> et derniere partie" 14 pages including 32 photos and 7 color profile drawings. "L'Avia BH-21 en Belgique" 9 pages including 29 photos and 4 color profile drawings.

## ITALY

**JP-4 Mensile di Aeronautica** (JP-4, Via XX Settembre 60, 50129 Firenze; L 27.000. English summary of selected articles.

**#2 Febbraio 2008** (100 pages) Color photos: Pakistan F-16 and Afghan Mi-17 & An-26. "Gil Hornet australiani" 6 pages including 11 photos. "Incidenti Militari" ½ page including 2 photos "Un disastro aerodinamico" one page including 4 photos (Ethiopian Saab-17). "Recensioni" 2 pages with 8 book reviews.

**#3 Marzo 2008** (100 pages) Color photos: RAAF Boeing 737 AEW&C; Brazilian AF Ipanema; Equatorial Guinea Enstrom 480; and Macedonian Mi-24. "Presentato lo SpaceShip Two" 3 pages including 8 photos of SpaceShips One and a model of SpaceShip Two. [Ed: I'm still waiting for someone to release a kit of SpaceShip One. And, SpaceShip Two is even more attractively unique.] "Il Museo Militare di Pechino" 2 pages with 12 photos of aircraft at the Beijing museum. "Incidenti Militari" 2½ pages including 8 photos. One photo is of a recently delivered Polish AF C-295 '019' that crashed with the death of 20 military personnel. Elsewhere in this issue we read that as a result, Slovenia cancelled their order for the C-295 [Ed: a vacuform kit of the C-295 is still available from the SAFCH Sale Service.] "Recensioni" 2 pages with 7 book reviews.

## NETHERLANDS

**MODELBOUW IN PLASTIC** (IPMS-Nederland, c/o Luuk Boerman, Kerkstraat 2, 2471 AP Zwammerdam. E-mail: lucasb@normadblend.nl.

**4/2007** (40 pages) "Fokker D.III" 2 pages on Dutch use of the D.III including one photo, individual a/c histories, and a color 3-view drawing. "Dornier Do 23" 2 pages on building the 1/72-scale Planet Models kit including 2 photos of the model finished in Luftwaffe colors. [Ed: The model can also be finished in Bulgarian markings.] Other articles include: "Revells 1/72 Gato

klasse onderzeeboot", "Revells 1/400 Queen Mary 2", and 8 kit reviews (with text describing modifications and color schemes for Dutch Harvards).

**5/2007** (40 pages) "Nederlandse Fokker D.III" one page with two color photos of completed 1/72-scale model. "Modelcraft 1/48 North American Harvard Mark 4" 6 pages including 7 color photos of 4 models in various stages of construction as Dutch machines, and 10 color photos of the finished models (or are they photos of the real thing; the models are so well done that I can't tell the difference). "Hasegawa 1/32 Junkers Ju 87D en 'G' Stuka" 5 pages with 23 color photos. "Hokum Spokum Pilatum Pas!" 2 pages on the 1/48 Kamov 50 Hokum including one photo of the completed model. "De B-25 Mitchell in dienst van de ML-KNIL (Part 2)" 5 pages including 4 photos and 10 color profile drawings. "Euro Scale Modelling 2007" 5 pages with 65 color photos. (including a diorama of a Dutch armor car carrying orange triangles; and a figure of a female cute Russian tank crew member. [Ed: The superb quality of the paint finish on the a/c and armor has to be seen to be believed.] Non-aviation articles include "Izorski Fiat" on building a funky WWI Russian armored car.

**1/2008** (40 pages) "Air Zermatt: Revell's 1/32 Eurocopter EC-135" 6 pages including 24 photos of the model at various stages of construction. "Trumpeter 1/72 Shenyang F-811B Finback" one page with one photo of completed model. "Special Hobby 1/72 339B/E Buffalo Mk.I" one page. "Planet Models 1/72 Heinkel He 119V4" 2 pages including 2 photos. [Ed: I know the Luftwaffe is not a "small" air force, but I can't resist funky-looking experimental a/c.] "De Hiller UH-12 in dienst van de Nederlandse Luchtmacht" 4 pages including 4 photos of the completed model, 6 photos of the UH-12 in Dutch service, a table listing the history of all Dutch UH-12, and a general-arrangement drawing. "Trumpeter 1/72 British Gannet AS Mk.1/4" 2 pages. Non-aviation articles include "Long Range Desert Group" (Revell's 1/76 kit), "A7V Sturmpanzerwagen" (Tauro Models 1/35 kit), and "Viskotter UK 223 Maartje" (1/200 scale model of a "Fish Cutter" - I speak Dutch like a native and I never had a lesson.]

## POLAND

**LOTNICTWO** (Krystof Zalewski, ul Grochowska 306/310, pok. 206, 03-840 Warszawa. E-mail: kz@magnum-x.pl.)

**11/07** (68 pages) Color photo: Thailand S-92. "Fuerza Aérea Uruguay" 7 pages

including 14 photos (Aermacchi SF.260; Cessna T-41, OA-37, & U-206; Beech Baron; Pilatus PC-7; IA-58 Pucara; Embraer C-120 Brasília & R-95 Bandeirante; Bell UH-1H & 212; AS.365 Dauphin; and CASA C-212 Aviocar. "MiG-29 – trzydziści lat później" 10 pages including 17 photos (all Soviet/Russian). "Zagraniczne zakupy silników lotniczych dla polskiego lotnictwa wojskowego w latach 1926-1939 (cz.I)" 6 pages on Polish aircraft engines including 10 photos (PZL-1, 7, 7a, 8, & 11 and, Spad-51 & 61). "Bell P-39 Airacobra (cz.II)" 9 pages including 11 photos, 4 color profile drawings [USAAF (2), French, & Italian], and a scale 6-view drawings of the P-39Q-25.

**12/07** (68 pages) Color photos: Bulgarian C-27J. "Pozegnanie irlandzkich Alouette III" one page including 4 photos of Irish Air Corps helicopters [Alouette III (2), EC.135, & AW.139]. "Sily Powietrzne Macedonii" 6 pages on the Macedonian air force including 13 photos [Mi-8 (2), Mi-24 (2), Mi-17, Su-25 (2), Bell UH-1H (2), Zlin 242 (2), An-2 (2)] "Zagraniczne zakupy silników lotniczych dla polskiego lotnictwa wojskowego w latach 1926-1939 (cz.II) 8 pages including 11 photos and 4 color profile drawings (PZL-37B, PZL-11c, PZL-24/III, and Bulgaria PZL-43). "Reggiane Re.2001" 8 pages including 18 photos, a scale 5-view drawing, and 2 color profile drawings.

**1/2008** (100 pages) "36. Specjalny Pułk Lotnictwa Transportowego" 5 pages including 7 photos (Tu-154, M-28, Mi-8, Bell 412, & CASA C-295). "Sily Powietrzne i Obrona Przeciwlotnicza Serbii" 9 pages on present-day Serbian AF including 19 photos (Orao, Super Galeb, Kraguj, MiG-21 & 29, An-26, Gazele, & Mi-8), and AoB for 1991 & 2007. "Początki awiacji w Warszawie: 1909-1912" 9 pages including 12 photos and 3 color profile drawings [Farman-Awiata IV (2) & WTL Awiata]. "Me 420 Hornisse (cz.II)" 10 pages including 28 photos and 3 color profile drawings. "Zagraniczne zakupy silników lotniczych dla polskiego lotnictwa wojskowego w latach 1926-1939 (cz.II)" 7 pages on Polish-designed a/c engines including 5 photos and a color profile drawing (PZL-38 Wilk).

**Numer Specjalny 4: Lotnictwo w II Wojnie Światowej** (84 pages) "Polskiego lotnictwa wojskowego 1936-1942" 8 pages including 13 photos, 4 color profile drawings (PZL-37B Łos, PZL-23 Karaś, RWD-14 Czapla, & PZL-11c).

"Messerschmitt Me 210" 12 pages including 18 photos (4 Hungarian), 5 color profile drawings (one Hungarian), and 2 pages of scale 5-view drawings (Me 210V-1, Me 210A-0, & Me 210Ca-1). "Lockheed P-38 Lightning" 15 pages including 26 color photos, 6 color profile drawings, and a scale 6-view drawing (P-38L-5-LO). "Brytyjsko-amerykańska ofensywa bombowa przeciwko III Rzeszy: 1942-1943" 12 pages including 21 color photos and 5 color profile drawings. "Mitsubishi Ki-83" 12 pages including 21 photos and a scale 4-view drawing. "Curtiss P-40 w ZSR" 11 pages including 18 photos, 4 color profile drawings, and a scale 6-view drawing (P-40E). "Polskie załogi Havoców" 5 pages on Poles flying Navoc/Bostpn with 23 Squadron RAF including 8 photos, and a color profile drawing. "Pierwsze Messerschmitty 109 zestrzelone nad Polską" 5 pages on the first Bf 109 shot down over Poland including 9 photos.

#### USA

**IPMS/USA JOURNAL** (IPMS/USA, PO Box 2475, North Canton, OH 44720-0475 USA. Six issues per year: In USA: \$25 for adults (18 and older) and \$12 for juniors (17 and younger); Canada & Mexico \$30; all other \$32.)

**January/February 2008 – Volume 20, Number 01** (80 pages) Nothing of small-air-force interest. Articles of aviation interest are: "Scratch One Flatop: A forced-perspective diorama of the Battle of the Coral Sea" and "Beech Party: The Air Force's T-34A trainer in 1:48 scale resin".

**WWI AERO** (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$42.00 USA or \$47.00 overseas).

**#198 Nov 2007** (128 pages) A new format with better quality paper and digital printing. "S.F. Cody's Historic Flight and the 'Wing Warping' Controversy" 3 pages including 2 photos and a small 3-view. "The Russian Military Air Fleet 1914-1917" 8 pages with 16 photos, "Albatross D.III(Oeffag): The Conclusion of the Project" 6 pages including 8 photos. "The Gallaudet Story: Part 17: The Gallaudet-Drive Monoplane Designs Models D-5, DM-5 and D-7" 6 pages including three 3-views. "The US Navy's Flamboyant Fish Boats" 5 pages with 13 photos. "The Linke-Hofmann Giant Machines" 3-page reprint of a 1920 article including one photo and one small 3-view. "Report on the Present

State of Camouflage in the Air Service" 11-page reprint of a 1918 report including 8 color photos. "Sopwith Pup Restoration" 5 pages including 8 photos. "The Bleriot XI in Latin America" 7 pages including 3 photos and a scale 3-view drawing. "Gallery" 9 pages with 24 photos. "Little-Known Treasures of the Old Rhinebeck Aerodrome: The Aeromarine 39-B" 5 pages including 9 photos. "The Case of the Curious Card: Odd Stances Lead to an Odd Adventure" 4 pages on the search for the story behind a candid photo of German and French officers standing before an Euler. "The Zeppelin is Down" 4-page story of the downing of L-37 including 2 photos. "Identification X" one page with 3 photos. "Models" 10 pages including 19 photos. "Times Tarmac" 6 pages with 16 photos of the Curtiss America. "Aircraft" 8 pages with 17 photos of Boland-designed airplanes including a scale 3-view drawing of his 1913 Flying Boat. "Letters" 2 pages. "Publications" 4 pages.

**SKYWAYS: The Journal of the Airplane** 1920-1940 (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$42.00 USA or \$47.00 overseas.).

**#85 January 2008** (80 pages) "Civil Aircraft Colors" 16 pages including 6 photos, color cover painting, and 6 pages of color samples. "Douglas DC-5, The Forgotten Transport" 7 pages including 10 photos and a 3-view drawing. "Farnborough's Final Fighters" 7 pages including 11 photos. "ID UNK (Identification Unknown)" 2 pages including 6 photos. "The Good Ship Lollipop and the DC-2" 3 pages including 9 photos. "Pan American's Flying Boat Bases, Part 2: The Caribbean and South America - Miami's Dinner Key" 7 pages including 9 photos. Cockpits: Navy Douglas TBD-1 Torpedo Bomber" 5 pages including 13 photos. "One Wing or Two? US Navy and Marine Corps Fighters 1930-1940" 9 pages including 13 photos. "December 7, 1941: The Other War in the Air" 3 pages on civilian a/c caught in the air by the Japanese attack; includes a photo and 3-view drawing of Aeronca 65 that survived an attack. [Ed: A fascinating article and an inspiration for the modeler or artist for a great "dogfight double", an Aeronca and a Zero.] "Reproductions and Restorations" 2 pages including 4 photos. "Models" 3 pages including 2 photos.



# The Letov Š-228E and the Estonian Air Defense („Õhukaitse“) 1932-1940

Marcel Kareš and Toivo Kitvel

On 1 July 1930, the name of the Estonian military aviation establishment was changed to Õhukaitse (Air Defense). (Note 1) This term include not only the Flying Divisions (Note 2), but also the Flying School, the Aviation Base (Note 3), and the Anti-Aircraft Artillery Group.

## The Estonian Air Defense Modernizes

In the second half of the 1920s, the Estonian economy prospered allowing Estonia to proceed with the long-delayed modernization of its air forces. This modernization started in 1928 when the Flying School (Lennukool) in Tallinn accepted 56 young lieutenants who had just graduated from the Military School - 45 to be trained as pilots and 11 to be trained as observers. In the same year, twelve Avro 504Rs (s/n 104-115) were bought for training purposes. Next year, six Avro 594B Avian IVs (s/n 116-121) were added to the training inventory.

In 1929, the time had come to buy new fighters. A competition was held that was won by the Czechoslovak Letov Š-31. However, this aircraft was never purchased, for in December 1929, it was decided instead to purchase twelve Bristol Bulldog Mk. IIs (s/n 122-133) from Great Britain. The Bulldogs were delivered to the 3<sup>rd</sup> Single Flying Division (Üksik Lennuväedivisjon nr 3 - ÜLD nr 3) at Lasnamägi (Tallinn) in August of 1930. Purchased at the same time were two 2-seat fighter-trainers - Armstrong-Whitworth Siskin IIIC (s/n 134-135).

Also being considered at this same time was a replacement for the Airco de Havilland D.H.9 reconnaissance / light bombers. Many companies were interested in obtaining this contract: the British companies Fairey, Hawker, Armstrong-Whitworth, Vickers, and Avro; the French companies Breguet and Potez; the Czechoslovakian company Letov; the American company Curtiss, and the Swedish A.B. Flygindustri (producers of Junkers airplanes). There were 26 different types in the competition which the British Hawker Hart won in the first round.

The choice of Hawker Hart was challenged in the second half of September 1931, when the Czechoslovak company Letov introduced a new

plane, the Š-128 with a demonstration tour of Estonia, Finland, and Latvia. On 16-17 September 1931, the prototype of Letov Š-128 was demonstrated in Tallinn by the factory test pilot Jan Anderle. Designed by Ing. Alois Šmolík, the Letov Š-128 was equipped with a French Gnome-Rhône Mercure VIIa engine of 390 kW (530 hp) maximum output.

After this presentation, the commander of the Estonian Air Defense (EAD), Col. Richard Tomberg, decided to order eight Hawker Harts (four with floats and four with land undercarriages) and four Letov Š-128s. The Hawker Hart cost 5514 pounds (77,196 Estonian Crowns) each, while the Letov Š-128 was a bit less expensive at 19,250\$ (72,187 Estonian Crowns) each.

## The Letov Š-228Es Arrives in Estonia

The Estonian Letovs, designated Š-228E (E for Estonian) were given s/n 137 to 140. Their armament consisted of two fixed synchronized Vickers 7,7-mm machine guns and one flexible Lewis 7,7-mm machine gun. Two bomb racks were fitted under the wing each carrying four bombs, and there was a bomb rack for heavier bombs under the fuselage. Maximum bomb load was 784 lbs (ca 355 kg).

The Estonian aviators, who were assigned to fly the aircraft to Estonia, arrived in Prague in late April of 1932. The crew consisted of four experienced pilots and three mechanics under the command of Lt. Col. Karl Haas. The Letovs were to be piloted by Capt. Richard Rotberg, Capt. Aleksander Braun, 2<sup>nd</sup> Lt. Peeter Olt, and Sgt. 1<sup>st</sup> Class Nikolai Schmidt. The three mechanics were Sgts. 1<sup>st</sup> Class Karl Turu and Harald Essmann, and mechanic Terepson.

The Estonian aircraft were completed in late April, and in early May they were test flown. After fixing a few small defects and further test flights by the Estonian pilots, the aircraft were accepted on 18 May. They left Prague for Tallinn on May 20, 1932.

While landing at Krakow, Poland, for refueling, s/n 138 and s/n 139, piloted by Capt. R. Rotberg and Sgt. 1<sup>st</sup> Class N. Schmidt, collided. The other two Letovs, s/n 137 and s/n 140, piloted by Capt. A. Braun and 2<sup>nd</sup> Lt. P. Olt (with Lt. Col. K. Haas as the

observer) continued on to Estonia, reaching Tallinn on 23 May. After waiting a month for parts, the two repaired Letovs arrived in Estonia on June 15, 1932. Soon after, all four aircraft were officially introduced to representatives of the Estonian Army.

The Estonian Letovs were assigned the prefix Šm which explains why they were called Šmoliks, not Letovs. (Note 4)

### **The Estonian Air Defense (Õhukaitse) in the Thirties**

The new aircraft were sent to the 3<sup>rd</sup> Flight of the 1<sup>st</sup> Single Flying Division (ÜLD nr 1) at Rakvere. The 92 members of ÜLD nr 1 were under command of Lt.Col. K. Haas. Later commanders of ÜLD nr 1 were: Maj. Valfried Gutmann (21.09.1934 – 13.01.1937) and Maj. Hugo Jaanson (13.01.1937 – 1940).

#### **1932**

In 1932, ÜLD nr 1 consisted of three flights with a total of 17 aircraft.

- 1<sup>st</sup> Flight: Commander Capt. Eduard Läte – 6 fighters Gourdou-Leseurre GL-22B and one training Avro 504K
- 2<sup>nd</sup> Flight: Commander Lt. Feliks Robinson – 5 reconnaissance/light bombers Airco de Havilland D.H.9, and one training Avro 504K
- 3<sup>rd</sup> Flight: Commander Capt. R. Rotberg – the four new Letov Š-228Es

August 10, 1932 at 7:15, Letov Šm 140, piloted by Capt. R. Rotberg and observer Capt. Raud, crashed on the bombing range at Kurtna. The plane was seriously damaged and had to be sent to the Letov factory in Prague for repairs.

In 1932 the strength of the EAD (Estonian Air Defense) was at its peak. Procured in the same year as the Šmoliks were four Avro 626 Prefects (AL 141-AL 144) and eight Hawker Harts (HH 145-HH 152). In addition, a crashed Avro 594B Avian IV (s/n 117) was completely rebuilt and received new s/n 153. In total, the Estonian Air Force possessed 77 aircraft. Thirty were relatively modern: 12 Bristol Bulldog Mk. II fighters; 12 light bombers consisting of 8 Hawker Harts and 4 Letov Š-228Es; and 4 Avro 626 Prefects and two Armstrong-Whithworth Siskin IIIDC trainers.

#### **1933**

On April 1, 1933, ÜLD nr 1 had the following aircraft:

Combat ready: DH 68; GL 83, 87, 88; and Šm 137-138

Operational: DH 31, 70; AK 72, 74, 75; GL 82; and AR 113

Under repair: DH 32, 71; GL 76; and Šm 139

Under repair at the Aviation Base (Lennubaas): GL 85; and Šm 140

#### **1934**

On June 17, 1934, ÜLD nr 1 was reduced from three flights to two.

On August 1, 1934, ÜLD nr 1 had the following aircraft:

1<sup>st</sup> Flight: Commander Capt. F. Robinson, four Hawker Harts (HH 145-148) and one Airco de Havilland D.H.9 (DH 68)

2<sup>nd</sup> Flight: Commander Lt. Oskar Soots, four Letov Š-228Es (Šm 137-140), one Avro 504K (AK 75), and one Avro 504R (AR 113)

#### **1935**

On October 3, 1935 the EAD had the following aircraft:

ÜLD nr 1 at Rakvere

1<sup>st</sup> Flight: HH 145-148, DH 68, and AR 108

2<sup>nd</sup> Flight: Šm 137-140, AR 113, and AR 115

ÜLD nr 2 at Tartu consisted of two flights with four Potez 25.13s (HP 93-96) and four Potez 25A.2s (HP 97, 99-101).

ÜLD nr 3 at Tallinn consisted of three flights with twelve Bristol Bulldog Mk. IIs (BB 122-133).

Single Seaplane Flight (Üksik Merelennusalk) was based at Tallinn's harbor with four seaplanes Hawker Hart (HH 149-152).

Flying School had two flights of Avro 504R training planes.

Altogether, in 1935, Estonia had 12 fighters and 20 light bombers to defend its skies.

#### **1937**

In 1937 ÜLD nr 1 consisted of two flights:



1<sup>st</sup> Flight: four Hawker Harts (HH 145-148) and one training PON-1A (PON 155)

2<sup>nd</sup> Flight: four Letov Š-228Es (Šm 137-140) and one training PON-1A (PON 157)

In 1937, Estonia sold eight Potez 25s and eight Bristol Bulldog Mk. IIs to the Spanish Republicans. As a result of this deal, the EAD had substantially more finances to modernize its armament. However, this deal seriously weakened the EAD, which was already insufficiently armed. The EAD shrank to just a few combat ready aircraft. Since a majority of planes sold belonged to ÜLD nr 2 at Tartu and ÜLD nr 3 at Lasnamägi (Tallinn), it was necessary to reassign the planes that were left.

#### **Letov Š-228Es in the 2<sup>nd</sup> Single Flying Division (ÜLD nr 2) at Tartu**

In the spring of 1937, the recently-reorganized ÜLD nr 2 based at Tartu consisted of two flights. The commander was Lt.Col. Juhan Karl Fischer. The Letov Š-228Es were moved to the 1<sup>st</sup> Flight under the command of Capt. Helmar Ruus. The 2<sup>nd</sup> Flight under the command of Lt. Aleksander Riisenberg, had no combat aircraft.

As of July 1, 1937, the hours flown by the Letov Š-228Es of ÜLD nr 2 were: Šm 137 – 485 h 30 min; Šm 138 – 340 h 35 min; Šm 139 – 387 h 30 min; and Šm 140 – 349 h 00 min.

#### **1938**

May 12 1938: Capt. H. Ruus together with his mechanic H. Peet crashed during the training flight in Letov Šm 139. The aircraft was seriously damaged and scraped.

June 21 1938: at 10:45 hours pilot, Lt. A. Riisenberg together with the Warrant Officer Hugo Nõmm crashed Letov Šm 138 during a regular training flight.

#### **1939**

May 13 1939: The EAD renamed the Single Flying Divisions (Üksik Lennuväedivisjon, ÜLD) to the shorter Flying Divisions (Lennuväedivisjon, LD).

May 17 1939, Lt. A. Riisenberg took the command from Capt. H. Ruus.

July 1 1939, The commander of LD nr 2, Lt.Col. J. K. Fisher, was replaced by Maj. Evald Reinhold Döring.

### **The Soviets Occupy Estonia**

On August 23 1939, Moscow signed a Non-Aggression pact with Germany. The Ribbentrop-Molotov pact had a secret protocol giving control of the Baltic states to the USSR. Under Soviet pressure, then Estonia signed a Mutual Assistance Pact with the USSR on September 28, 1939, allowing 25,000 Soviet soldiers to enter Estonia and allowing the Soviets to build air and naval bases on Estonian territory.

#### **1940**

Status of Estonian Air Defense on April 1, 1940

Unit	Combat Ready	Operational	Under Repair	Total
<b>LD nr 1</b>	2	4	3	9
HH 146-152, PON 155, PON 157				
<b>LD nr 2</b>	2	2	2	6
Šm 137-138, Šm 140; PON 154, PON 156; AA 120				
<b>LD nr 3</b>	4	2	1	7
BB 122, BB 128-129, BB 133, AA 116, AA 121, AAn 158				
<b>Flying School</b>	0	11	0	11
AR 107-110, AR 112; Si 135; AL 141, AL 143-144; MM 159; PTO 161				
<b>Aviation Base</b>	0	3	1	4
AR 111, AR 119; PN 160; PTO 162				
<b>Total</b>	8	22	7	37

On 17-18 May 1940, LD nr 2 received five Henschel Hs 126B-1s (Hs 163, 164, 166, 167, 168) from Germany.

On 14 June 1940, Soviets began an air and naval blockade of Estonia. On 16 June, Moscow sent an ultimatum, requesting a change of government and

free entry of more Red Army troops into Estonia. The next day, Soviet troops marched into Estonia and together with the Red troops already deployed in Estonia, the Red Army begun the final occupation of Estonia.

On 22 June 1940, LD nr 2 was moved from Tartu to a new base at Jõgeva. The same day the Estonian Army was renamed the Estonian National Army. The Council of the People's Commissars of the Estonian Soviet Socialistic Republic decided on 29 August 1940 to reorganize the National Army of the Estonian Soviet Socialistic Republic (Eesti Rahvaarmee). It changed it to the 22<sup>nd</sup> Territorial Rifle Corps (22. territoriaalne laskurkorpus), consisting of two divisions: the 180<sup>th</sup> Rifle Division (180. laskurdiviis) in northern Estonia under the command of Major General R. Tomberg and the 182<sup>nd</sup> Rifle Division (182. laskurdiviis) in southern Estonia under the command of Major General J. Kruus. These Estonian national units were included in the recently-formed Baltic Special Military District.

On 1 July 1940:

1<sup>st</sup> Flight: Šm 137 was under general repair. Šm 138 was operational and by this date it had flown 666 hours and 35 minutes. Šm 140 was combat ready and had flown 606 hours 10 minutes. AA 120 was operational and had flown 1427 hours 55 minutes, PON 154 – 505 hours 25 minutes and PON 156 was operational and had flown 220 hours and 35 minutes.

2<sup>nd</sup> flight: It consisted of the five operational Henschel Hs 126 B-1s.

The Soviets formed the Single Flying Squadron (Üksik lennueskadrill) from the former Estonian Air Defense on 4 October 1940. Its base was at Jägala and it belonged to 180<sup>th</sup> Rifle Division of the 22<sup>nd</sup> Territorial Rifle Corps of the Soviet Red Army.

Since the September 1940, the 2<sup>nd</sup> Flying Division (LD nr 2) was in the process of disbandment. This was finished on 25 December. Some of its aircraft were handed directly to the Soviet air force (VVS-RKKA): Letov Š-228Es Šm 137, Šm 138, Šm 140, AA 120, and PON 156. The rest of its aircraft - Henschels Hs 163, Hs 164, Hs 166, Hs 167, Hs 168 and PON 154 were handed over to the new Single Flying Squadron of the 22<sup>nd</sup> Territorial Rifle Corps. An estimated 208 Estonian pilots, observers, mechanics, and technicians were moved to this unit, where they were equipped with five Henschel Hs

126B-1, six Hawker Hart, and six PON 1A and PTO-4. (Note 5)

On 29 October 1940, Šm 137, Šm 138 and Šm 140 were stationed at Tartu and were included in the Soviet 4<sup>th</sup> Mixed Flying Division.

The rest of Estonian aircraft were handed over to the Soviet air force (VVS-RKKA). Some of these aircraft were transported to the USSR by the end of 1940. Some were evacuated soon after Germany attacked the USSR (e.g. Avro Anson Mk. I, Hs 126B-1). Some were left at the airfields and were destroyed in the first days of the war. Four PTO-4 training aircraft that were found dismantled in the workshop of the Estonian Aeroclub in Tallinn, were included into *Sonderstaffel Buschmann*, a coastal patrol unit established on February 12, 1942 and manned by the former pilots of EAD.

Most of the aircraft of the Single Flying Squadron stationed at the Jägala airfield near Tallinn were destroyed by the retreating Soviet forces 1941 before the German troops occupied Estonia.

### Colors and Markings

Estonian Letov Š-228Es were painted silver on all surfaces (the so-called aluminum bronze) with the front of the fuselage painted black. During the test flights, the propeller blades were wooden; but by the time the planes were delivered to the Estonia the propeller blades were black. The Estonian national insignia, a blue-black-white triangle, was carried on the outer ends of the wings. On both sides of the rudder there were horizontal stripes: from the top - blue, black and white. Black numbers shaded in blue, 137, 138, 139, 140 were applied on both sides of the fuselage. On both sides of the fuselage, under the cockpit, there was the factory mark, Š.228E in black. On both sides of the vertical fin there was a small Letov factory logo painted in blue.

This standard Estonian Air Defense camouflage was applied to all the Letov Š-228Es for the whole time of their service. The only change noticed in some photos was the reduction or total absence the black behind the engine.

The first task for the Single Flying Squadron personnel stationed at Jägala was to paint red stars on their aircraft instead of the former national insignia. This is mentioned by Capt. A. Ürgsoo in his autobiography (written under the pen name Anti Ainik) *Lend leeki* (Flight into the Flame). So it is



more than probable that the Šmoliks also had stars painted on them. (Note 6)

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### Notes

1) The names of Estonian military aviation from 1918 to 1940: were:

21.11.1918 - 15.12.1918	Lennuväe poolrood
(Aviation Half - Company)	
15.12.1918 - 01.03.1919	Lennurood
(Aviation Company)	
01.03.1919 - 01.09.1919	Lennuväe salk
(Aviation Squadron)	
01.09.1919 - 01.08.1920	Lennuvägi
(Air Force)	
01.08.1920 - 01.06.1921	Lennurood
(Aviation Company)	
01.06.1921 - 15.03.1924	Lennuvägi
(Air Force)	
15.03.1924 - 01.07.1930	Lennuväe Rügiment
(Air Force Regiment)	
01.07.1930 - 1940	Õhukaitse
(Air Defense)	

2) We have used the official name for all units except for the Flying Divisions that were named as Single Flying Divisions up to 1939 when the word Single was dropped. The Flying Divisions were supposed to cooperate with (infantry) Divisions no 1, 2, and 3. Every infantry divisions had one and only one Single Flying Division that was intended to cooperate with it.

3) The Aviation Base (Lennubaas) contained the Aviation Works (Aviotehas) and many other units such as the Control Department, the Sanitary Department, and the Technical Department.

4) In December 1928, a new system of designations was introduced for the aircraft of Estonian Air Defense. Other prefixes used in the EAD were: Avro 594B Avian IV - AA; Avro Anson Mk. I - AAn; Avro 504K - AK; Avro 626 Prefect - AL; Avro 504R - AR; Bristol Bulldog Mk. II - BB; Airco de Havilland D.H.9 - DH; Hanriot H.321 - Ha; Hawker Hart - HH; Potez 25 - HP; Henschel Hs-126B-1 - Hs; Gourdou-Leseurre GL22B - GL; Miles Magister Mk. I - MM; PN-3 - PN; PON-1A - PON;

PTO-4 - PTO; Armstrong-Whitworth Siskin IIDC - Si.

5) Estonian personnel were screened for pro-Soviet attitudes. This screening was not all that foolproof as most of the pilots deserted when the Germans occupies Estonia.

6) There are photos of ex-Estonian Henschels Hs 126B-1s with Soviet red stars.

### Sources and Bibliography

1. Toivo Kitvel - private archives
2. Kareš Marcel - private archives
3. Eesti Riigiarhiiv, Estonian State Archives, Tallinn
4. Eesti Lennuala Arhiiv, Estonian aviation archives (established by Anatol Rebane)
5. Technical Museum Brno (Czech Republic), Aviation archives - fund of ing. Jan Krumbach
6. F. Gerdessen, T. Kitvel, J. Tilk, Aeg. Mehed. Lennukid. Eesti lennunduse arengulugu kuni 1940nda aastani. Tallinn, Eesti Entsüklopeediakirjastus, 2001
7. Toivo Kitvel, Johannes Tilk, Eesti lennukroonika - Tekste ja pilte aastani 1940, OÜ Aviopol, Tallinn 2003
8. Jan Krumbach, Reconnaissance plane Š-228.E, unpublished notes, Technical museum Brno
9. Jan Krumbach, Reconnaissance and experimental plane Letov Š-128 Mercury, unpublished notes, Technical museum Brno
10. Anti Ainik. Lend leeki. Ortoprint, Toronto, 1958.
11. Richard Humberstone, Estonian Air Force 1918-1940, Blue Rider Publishing, London 1999

### Caption for the photo on the front cover

Estonian Letov Š-228E with Estonian serial number 137 at airfield Prague-Letňany. Photo was taken on 12.05.1932. (Technical Museum Brno)

### Captions for the photos on pages 110 & 143

1. The four new Letov Š-228E for Estonia on the airfield Prague-Letňany. Photo was taken on 18.05.1932 at 10h00. (Ing. Jiří Vraný)
2. Estonian Letov Š-228E during the delivery flight from Prague to Tallinn in 20.05.1932. (Ing. Jiří Vraný)
3. On 20.05.1932, Šm 138 and Šm 139 collided while landing at Krakow, Poland, while on their delivery flight from Prague and Tallinn. (Johannes Tilk)

4. On 10.08.1932, Letov Šm 140 crashed on the bombing range at Kurtina. The plane was seriously damaged and had to be sent to the Letov factory for repairs. (Eesti Riigiarhiiv)

5. Group of Estonian airmen at airfield Prague-Letňany. From left: Sgt. 1st Class. K. Turu, Sgt. 1st Class N. Schmidt, Capt. R. Rotberg, Lt. Col. K. Haas, Capt. A. Braun, 2nd Lt. P. Olt, and Sgt. 1st Class V. Essmann. (Eesti Riigiarhiiv)

6. Letov Šm 139 from ÜLD nr 1 in flight. (Eesti Riigiarhiiv)

7. Estonian Letov Š-228E from ÜLD nr 1 at Rakvere airfield. (Tiina Bergmann)

8. Group of Estonian PON-1A (s/n 154-157). These Estonian training aircraft were powered by

English Gipsy Major engines. This photo was probably taken in the summer of 1936. (Anatol Rebane - Eesti Lennuala Arhiiv)

## The Alpha and the Omega

### Captions for the photos on the back cover

Top: The prototype Letov Š-128 with the factory test pilot Jan Anderle (in the leather overalls) before the demonstration tour of Estonia, Finland, and Latvia. (Technical Museum Brno).

Bottom: The wreck of an Estonian Letov Š-228E at Tallinn airfield after Estonia was occupied by the German Wehrmacht. (Alar Müür)

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**Letov Š-228E a Estonské Vojenské Letectvo 1932-1940**, by Marcel Kareš and Toivo Kitvel. 78 pages (170 mm by 240 mm). Color covers. Text in Czech with a 5 page English summary. One map. One color drawing of Š-228E (Šm 140).

Eighty photos: Black and white photos: Estonian Š-228E (26); Š-228E under construction (16); Estonian aircraft destroyed during the German attack on USSR (Avro 594B Avian IV, Avro 504R, Bristol Bulldog Mk. II, PON-1A and Letov Š-228E); Estonian aviators (12);

prototype Š-128 'OK-VOT' (6); Estonian airfields (2); other Estonian aircraft: Hawker Hart (2); Bristol Bulldog Mk. II (1); Avro Anson Mk. I (1); Henschel Hs 126B-1 with Soviet red stars (1); group of PON-1A trainers (1); group of Gourdou-Leseurre GL-22B fighters (1); group of aircraft: two PTO-4s and a Miles Magister Mk. I (1); group of many different types (1); Czechoslovak Letov Š-228.5 'OK-VOU' (3); containers transporting Š-228E to the Spanish Republicans (2); and Czechoslovak Aero Ab-11 visiting Estonia (1).

Two color photos of Czech planes in Estonia today: Estonian Let L-410UVP and Estonian Aero L-39 Albatros.

Tentative date of printing: March/April 2008. Tentative price: ca 200-300 Czech Crowns (1 USD ca 17.05 Czech Crowns).

Anyone interested in this book should contact the author: Marcel Kares, Nalžovské Hory 41/I, 341 73, Czech Republic, or e-mail <mkares@seznam.cz>.

## Enciclopedia de la Aviación Militar Española

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#111. CASA C-212 Aviocar (continued). Pages 1767-1782. 27 color photos, a two-page 3-view color drawing, and 11 color profile drawings. Poster inserts: Grumman HU-16B "Albatross"; AD.1B-8 perteneciente a la 801 Escuadrilla de Salvamento. Hawker "Osprey" G-AEBD.

#112. CASA C-212 Aviocar (continued). Pages 1783-1798. 23 color photos, a two-page 3-view drawing, and 9 color profile drawings. Poster insert: Fiat CR.30B: Avion matriculado 3701 encuadrado en la Escuela de Caza. Canadian Car and Foundry (Grumman) GE-23 "Delfin"; Avion 5W06 encuadrado en la Regimiento Mixto n.º2 (Patrulla 41).



#113 CASA C-212 Aviocar (continued). Pages 1799-1814. 11 color photos, a table

listing individual aircraft, a scale 3-view drawing, 3 side-views of variants, a two-page 3-view color drawing, and 8 color profile drawings. Poster inserts: Heinkel He 115A-0; Encuadrado en el AS/88 de la Legion Condor. Heinkel He 46; 75-6 (R.1-157) de la Escuela de Tripulantes de Malaga.

#114 CASA C-235M. Pages 1815-1830. 11 color photos (including Saudi Arabia & Ireland), table of aircraft in Spanish AF service, a scale 3-view drawing, a 2-page color 3-view drawing, and 4 color profile drawings [Saudi Arabia (1) and Spain (3)]. Poster inserts: CASA C-1145L; Primer avion fabricado en Espana. Gonzalez Gil-Pazo GP-4; Avioneta 30-20 de la Aviacion Nacional.



# Los Kingfishers sobre las Costa Mexicanas

Santiago A. Flores

## Introduction

Over the years a number of aircraft have served with both the Fuerza Aerea Mexicana (Mexican Air Force) and the Aviacion de la Armada de Mexico (today known as Fuerza Aeronaval). Even to this day, aircraft types like the Mil Mi-17, Beech F-33C, PT-17, PT-19, and De Havilland DHC-5D serve in both air arms. One of the first types to see service in both air arms was the Sikorsky OS2U-1/OS2U-3 Kingfisher when a number of Mexican Air Force Kingfishers were transferred to the Aviacion de la Armada de Mexico.

The original USN (United States Navy) requirement was for an observation/scout plane that could operate from both sea and land bases. Both versions would see service in Mexican skies. The prototype Kingfisher first flew on 1 March 1938, and 54 OS2U-1 were ordered by the USN in May 1939, followed by 158 OS2U-2 in December 1939. In 1941 over 970 examples of the OS2U-3 were ordered. The US Naval Aircraft Factory would build 381 Kingfishers designated OS2N-1.

The OS2U-3 was exported to South America in small numbers: Chile 15; Cuba 3; and Uruguay 6. Other allied countries that received Kingfishers were: Australia: 18 (diverted from the Dutch East Indies order); United Kingdom: 100; USSR: 20; Dutch East Indies 6 (To be lost with the fall of the Dutch East Indies in 1942).

Mexico, would receive a total of 11 Kingfishers in 1942 and 1943.

## Kingfishers in the Mexican Air Force

Mexico broke off diplomatic relations with Germany, Japan, and Italy after the attack on Pearl Harbor on 7 December 1941, and the Mexican Air Force (Fuerza Aerea Mexicana) began patrolling its coastal waters looking for enemy submarines,

At that time, the Mexican Air Force could field only two Regimientos Aereos (Air Regiments) of three Escuadrones Aereos (Squadrons) each, to patrol the Mexican coastline. Of particular importance was the peninsula of Baja California bordering on the Pacific Ocean. When the 1<sup>o</sup>. Regimiento Aereo was sent soon after 7 December 1941, its equipment was obsolete compared to the Axis aircraft of the time,

particularly those of Japan, with its fleet of submarines (some with aircraft) that had the range to reach American shores and had attacked shipping even shelling shore installations in the United States.

The air service had the following types: Vought 02U-2M (purchased in 1929), Mexican built Corsario Azcarate (02U-4A; 32 built under license and delivered in 1932); Vought V-99M (10 purchased in 1938); and some surviving Consolidated Model 21-M (10 purchased in 1937 from Canada).

Mexico's first-line aircraft were general purpose aircraft that fitted the Mexican army's need for internal security. They most recently (November-December 1940) had fought against rebels in the state of Guerrero. Another major action had been fought in 1938 in the state of San Luis Potosi against the rebel General Saturnino Cedillo.

How the Vought Sikorsky Kingfisher was selected by Mexico is unknown to the author. Under the provisions of the Lend Lease act, these aircraft appear under a unknown requisition for 6 OS2U-3 aircraft, and the funding for these aircraft was as mentioned in a daily tactical USN report dated 30 May 1942:

*The U.S. Navy turned over six Vought Corsairs (obsolete attack planes) to the Mexican Government in exchange for certain engines which had been purchased by the Mexican government and were located in Mexico City. These six planes are believed to be in use in Western Defense Command of Mexico. The first Mexican Air Regiment, headquartered at La Paz BC has the paper strength of 33 aircraft but actually has only 27 plus the six Vought Corsairs.*

This obviously referenced to the 6 Vought Sikorsky Kingfishers OS2U-3 exchange for Pratt & Whitney R.1830 Wasp 14 cylinder engines as noted in the following Mexican newspaper account of 19 March 1942.

*There are now in Brownsville, six observation aircraft that were acquired by our government in exchange of 21 Bellanca*

engines, which the J.A.R.E (sic) donated to Mexico as a sign of appreciation for its policy in respect to the situation of the Spanish refugees.

After the fall of the Spanish Republic, Mexico paid the government in exile the same amount the Spanish had paid for 21 Bellanca 22-90B Flash aircraft that could not be delivered in time. The money was used by the Republicans to help settle refugees coming to Mexico. The Bellancas were pressed into Mexican Air Force service in September 1939, but after two fatal accidents they were removed from service after August 1940 and were stored. After the engines were exchanged, the fuselages of these aircraft were later sold as instructional airframes to a number of US aviation schools.

A group of Mexican pilots were sent to Brownsville, Texas, where they receive training on the Kingfisher. They were headed by Capt. 1/o. P. A. Pablo Avelar Rubio with the following pilots:

Capt. P.A. Felix Cabanas Hernandez  
Capt. P.A. Enrique Caloca Larios  
Capt. P.A. Lorenzo Egurrola  
Capt. P.A. Ramon Pardo Araquistain  
Tte. P.A. Roberto Perez Aguirre.

The six Kingfishers supplied were ex-USN OS2U-3 BuAer.5720 to 5725, in the land plane configuration. This particular model had the following specifications:

Wingspan:	35' 11"
Length:	33' 7"
Height:	15' 1.5"
Empty Weight:	4,310 pounds
Max Weight:	6,108 pounds
Power plant:	450 hp Pratt & Whitney R-985-AN-2 air-cooled radial
Armament:	One fixed 0.30 caliber machine gun with 500 rounds and one flexible 0.30 caliber machine gun with 600 rounds
Bomb load:	Two 100 lb bombs or two 325 lb depth charges.
Max. speed:	171 mph at 5,000 ft.
Cruising speed:	152 mph
Landing speed:	55 mph

Rate of climb	800 ft/min
Range:	908 miles
Endurance:	6 hours.
Service Ceiling:	15,500 ft.
Crew:	2 (pilot and observer/radio operator)

After pilots completed their training, all six aircraft were flown to Mexico City in two flights of three aircraft each. They arrived at Balbuena military airfield, Mexico City, on 25 March 1942 at 1100 hours. Present to celebrate the arrival of these new aircraft were, not only the general public, but the President of Mexico, General de Division Manuel Avila Camacho; the Secretary of National Defense, General de Division Pablo E. Mancias; the chief of the Mexican Air Force, General de Brigada P .A. Roberto Fierro Villalobos, the chief of the presidential staff; and other high ranking members of the Mexican armed forces.

The President inspected the aircraft and even sat in the cockpit of the one while by Capt. Avelar Rubio gave him an explanation of the cockpit. After reviewing the aircraft and talking to the crews, the President left the airfield satisfied and told the press this was the beginning of delivery of many new aircraft for the air force.

The markings in which these aircraft were delivered was most unusual. Before leaving the United States, the regular Mexican Air force tricolor triangle was not applied. Instead a circular green-white-red roundel was painted over the US star. Tricolor markings were painted on the rudder. The wing markings looked like the emblem of one of political party's in Mexico - the P.R.I (Partido Revolucionario Institucional). This marking was also that reported in *Janes All the Worlds Aircraft* during the war years.

It was reported in the local press that the six Kingfishers would be sent to the Pacific Coast and changed over to floatplanes. But this did not happened. Early in April, the six Kingfishers were sent to the Military Aviation Workshops to have their "Exterior Characteristics Changed" meaning the removal of the circular Mexican marking for the triangle insignia and Mexican Air Force numbers 69 to 74. (No.75 to 80 would be assigned to the first six North American AT-6B armed trainers received.)

On 9 April, the six Kingfishers departed from

Balbuena airfield piloted by the same pilots who flew them from the United States. Their destination was the airfield El Cipres, Baja California, near the port of Ensenada, where they would reinforce the 1/o. Regimiento Aereo. The aircraft were flown in two flights (Escuadrillas) one in charge of Capt. P.A. Felix Cabanas Hernandez with Capt. Enrique Caloca and Capt. Lorenzo Egurrola. The second flight was in charge of Capt. Ramon Pardo Atristan (KIFA 1947 Puebla, Puebla), Capt. Pablo Avelas Rubio (KIFA 1943 USA) and Tte. Roberto Perez Aguirre. Their mission was to deliver the aircraft, train the pilots on the Kingfisher, and to return to Mexico City. (The aircraft arrive around the 10<sup>th</sup>.)

As for the state of the 1/o. Regimiento Aereo, the following US military intelligence assessment gives us a picture of the regiment plus the airfield at El Cipres:

*1<sup>st</sup> Air Regiment (less detachments) Station Ensenada.*

*Planes: 19 Vought Corsairs (biplanes; old and in fair condition only). Replaced in 1943 by 8 A T-6's and 2 Douglas Dive Bombers.)*

*Airfield: Until/after 1942 or early 1943, SE of Ensenada. Surface sand and dirt. About 2400 feet in length. No hanger, planes park in open. Machine shop small and inadequate. Pilots - capable several having received instruction in the US. Present airfield and hangar at El Cipres started in 1942, was capable of landing heavy planes in October 1942.*

One of the pilots assigned to the 1/o. Regimiento Aereo was SubTte. P. A. Jacobo Estrada Luna, a future Squadron 201 pilot who would see action in the Philippines in 1945. He converted over to the Kingfishers and his first flight was recorded on the type on 1 June, when he flew No.71 on a 3:10 hour flight from Ensenada to Bay de Tortugas with a return flight on the 3rd back to Ensenada.

From June to November 1942, SubTte. Estrada Luna flew Kingfishers No.69, 70,71,72,73 and 74 in daily patrols until he suffered an accident on 29 November 1942, in Azcarate Corsair No.61 at El Cipres, Ensenada. But this would not be the end of his association with the Kingfishers.

By 31 July 1942, some Kingfishers were reported based at Mazatlan, Sinaloa, for patrol duty over the Sea of Cortez and the Pacific Ocean. Later, around

February 1943, five of the six Kingfishers were handed over to the Mexican Navy to form their 1/o. Escuadron Aeronaval at Balbuena airfield at Mexico City. The sixth Kingfisher was handed over by the end of 1944 as a floatplane.

The Mexican Air Force would receive five more "used" Kingfishers, but they were the OS2U-1 models under an unknown requisition via Lend Lease with a delivery date of 15 April 1943. The aircraft involved were ex-BuAer: 1684, 1692, 1782, 1731, and 1733.

These five aircraft were picked up at the NAS Pensacola, Florida, and the pilots involved were: Mayor P .A. Roberto Vega Fuentes, Capt. 2/o. P. A. Filiberto Mendivil Gomez, Tte. P.A. Graco Ramirez Garrido, Tte. P.A. Carlos Cervantes Perez, and Tte. P.A. Benito Flores Salinas

When these aircraft arrived in Mexico, they were given the following Mexican Air Force serial numbers:129, 130, 131, 132, and 133. It appears that some of these Kingfishers were in Mexico City for a time before being sent out for patrol duties in the Gulf of Mexico and the Caribbean. The logbook of Tte. Ing. Aer. P.A. Jesus Carranza Hernandez (future member of Squadron 201 in the Pacific) records two flights in a Kingfisher in Mexico City:

*4 June 1944; Sikorsky 133; 0.30 hr; practice*

*7 June 1944; Sikorsky 129; 1.10 hr; practice*

These Kingfishers may have received a two letter designation that was probably used only briefly. Since the AT-6 was using the letter P for Patrulla (Patrol), the Kingfisher's were assigned PS for Patrulla Sikorsky (Patrol Sikorsky) as noted in the pilot logbook of Capt. 1/o. P.A. Roberto Sa lido Beltran, who flew PS-131 on 22 June 1943 for a 30 minute flight at Mexico City.

SubTte. P.A. Jacobo Estrada Luna, after recovering from his accident, would see patrol duties in the Gulf of Mexico with the 2/o. Regimiento Aereo, doing a practice flight in Sikorsky 113 as noted in his pilot logbook on 8 June 1943 in Mexico City. His next flights in 113 were with the 2/o. Regimiento Aereo when it was at Merida, Yucatan:

<i>29 June 1943</i>	<i>Sikorsky 113</i>	<i>1:15</i>	<i>Patrol</i>
<i>29 June 1943</i>	<i>Sikorsky 113</i>	<i>1:45</i>	<i>Patrol</i>
<i>29 June 1943</i>	<i>Sikorsky 113</i>	<i>2:00</i>	<i>Patrol</i>
<i>30 June 1943</i>	<i>Sikorsky 113</i>	<i>1:00</i>	<i>Patrol</i>
<i>30 June 1943</i>	<i>Sikorsky 113</i>	<i>3:30</i>	<i>Patrol</i>



It should be mentioned that a number of pilots who would later fly P-47D with Squadron 201 of the Mexican Expeditionary Air Force in the Philippines in 1945, received training in the OS2U Kingfishers at the Naval Air Station Corpus Christie, Texas, and at the USCG Station St. Petersburg, Florida, from 1943 to 1944. Among these pilots was Tte. P. A. Amadeo Castro Almanza who crashed in a US Navy Kingfisher without injury.

In July 1943, a major change occurred in the Mexican Air Force when the Regimental system was disbanded and individual squadrons were formed. SubTte. Estrada Luna's unit became the 5/o. Escuadron Aereo assigned to the 32/o. Military Zone in Yucatan.

From July to August 1943, when he was transferred back to Mexico City to fly the Douglas A-24B dive bombers, SubTte. Estrada Luna flew antisubmarine patrols on the following Kingfishers: 129, 130, and 133. His longest mission was 4:30 hours in 133 covering Cozumel-Punta Z to Cozumel.

Another major change that occurred after July 1943 was new designations for the aircraft of the Mexican Air Force. The Kingfishers were assigned OZS (Observacion de Zona Sikorsky (Observation of Zone Sikorsky) and the number 4501 to 4505.

By October 1943, the Kingfishers were assigned to the 5/o. Escuadron Aereo under the command of Capt. 1/o. P. A. Ignacio Ortiz Diaz de Leon. However, four Kingfishers (129, 131, 132, and 133) were at the Military Aviation Workshops in Mexico City, while 130 was at Chetumal, Quintana Roo.

{In a previous article [SAFO Vol.31 No.1 (121) July 2007] Sikorsky OS2U-3 No. 69 was reported to be assigned to Squadron 202 at Puerto Cortez, Baja California, in December 1943. This author has found no evidence of this. US Intelligence reports for 5 January 1944 list the 1/o. Squadron (later 202) at Ensenada B.C. under the command of Major P.A. Raul Foullon Cabrera with 3 Douglas A-24 and 4 AT-6.}

The AOB (Air Order of Battle) for August 1943 mentions that five OS2U-1 were delivered to the FAM with the following note:

*11 /OS2U-3(sic) aircraft in service. (Six of these have been handed over to the Navy.)*

By January 5th 1944, it was reported that two of the Sikorskys were on strength with the 5/o.

Escuadron Aereo (later Escuadron Aereo 206) at Merida Yucatan. By 1946, five were noted with two in first-line service and the remainder in second-line strength at Escuadron Aereo 206 along with five North American AT-6 and one OS2U-1 forming part of the 2/o. Grupo Aereo (Air Group). By 1947, the 206th would have a change of equipment with the replacement of the AT-6 for five A-24B dive bombers and two national-built light transports Salinas IV and Salinas V aircraft. In March 1950, it was reported that there were six Kingfishers, of which three were reported as non-operational in the following Air Order of Battle:

*206 Squadron at Cozumel: A-24B 5; 21-M 1; OS2U 3; L-5E 3; and B-25J 3; General Training Center at Mexico City: T-6 4; AT-11 2; 21-M 3; UC-61 1; PT-19 2; OS2U 1; P-47 6; and V-99M 2. Air Force Shops at Mexico City: BT-15 5; OS2U 2; and P-47 2.*

In the 1950's the post-war air force's tight budget limited the number of operational aircraft. The 206th was under the command of Major P.A. Antonio Mejia Castro. As reported in a detailed British intelligence report of 1951 that covered the activities of 1950, the year 1950 was not be kind to the squadron with the loss of three A-24B and one Kingfisher. This report mentions the loss of OZS-4505 near Cozumel. Quintana Roo, in July 1950, with the loss of the crew who were never found. It also mentioned that from January to November 1950 the 206th flew 358:30 hours.

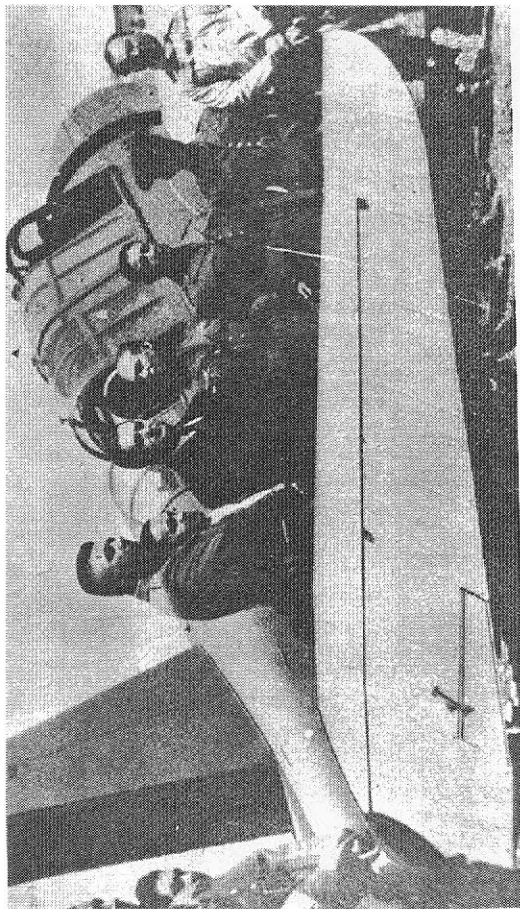
The last mention of the Kingfishers was in the above report that put the Kingfishers strength as:

*OZS: Serviceable 1; Unserviceable 3; Destroyed 1.*

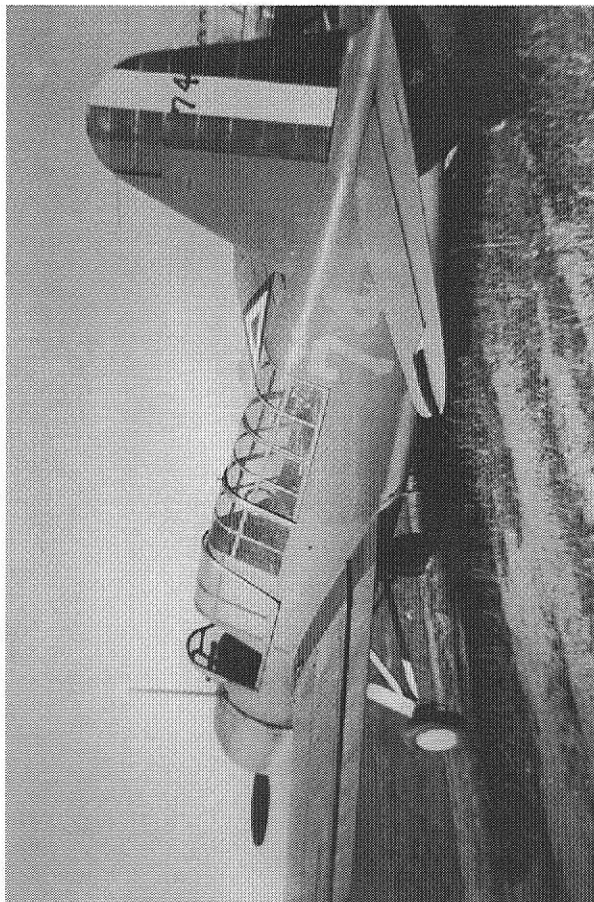
One source put the Kingfisher strength in 1954 as two aircraft in service. The type was finally retired in 1957. There have been reports that a fuselage of an air force Kingfisher still exist in Mexico but this has not been confirmed.

## **Mexican Navy**

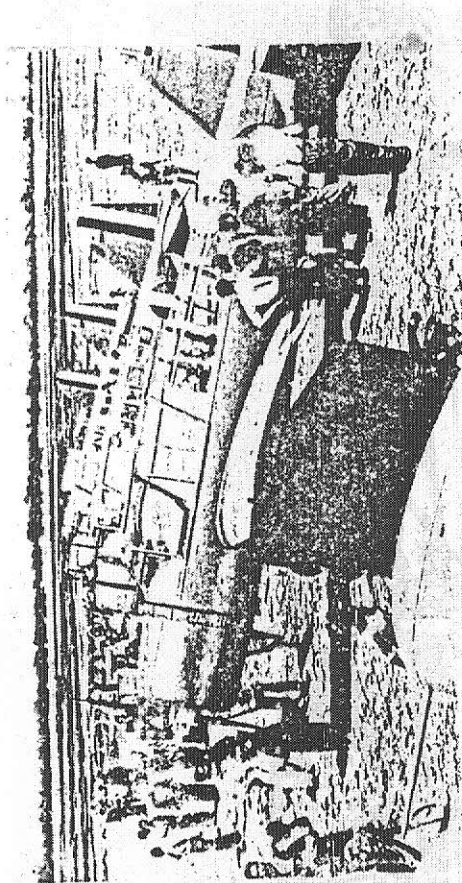
The aviation section of the Mexican Navy was established on 15 March 1926 with the title Cuerpo De Hidroaviones. From 1926 to 1943, a number of Mexican naval officers learned to fly at the Military



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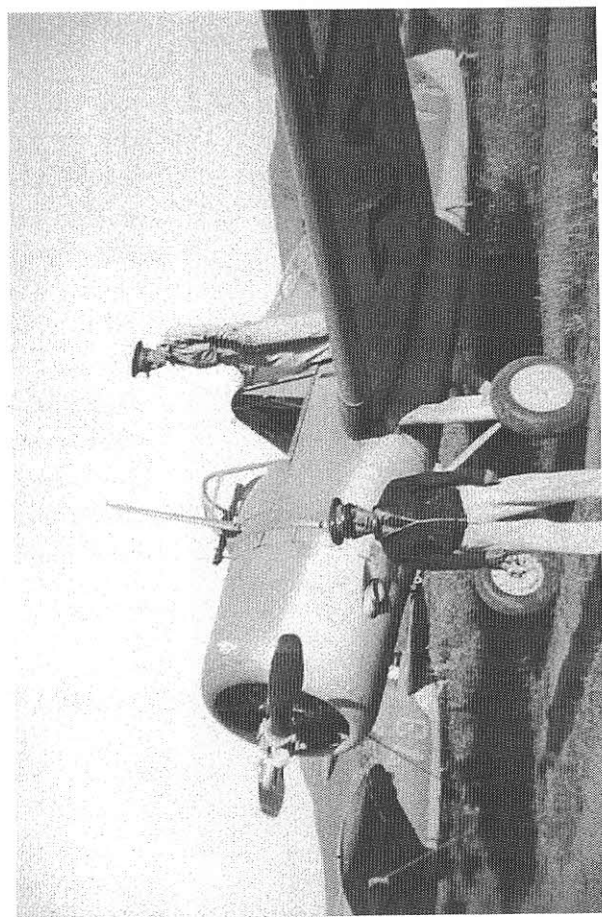


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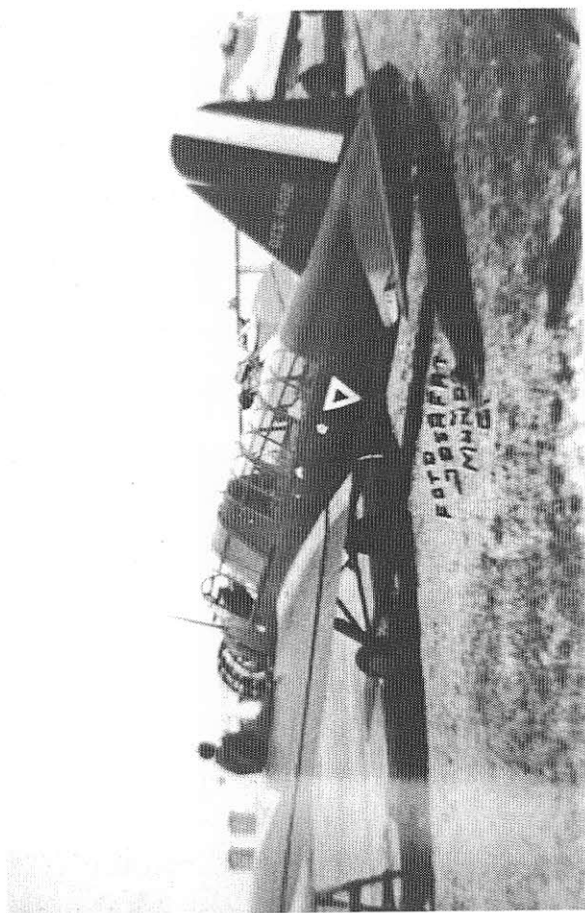


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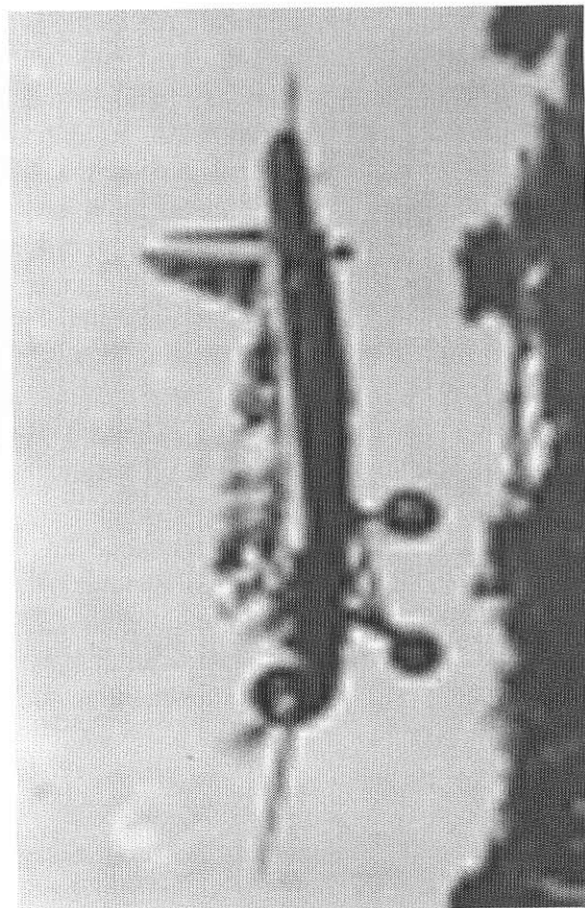




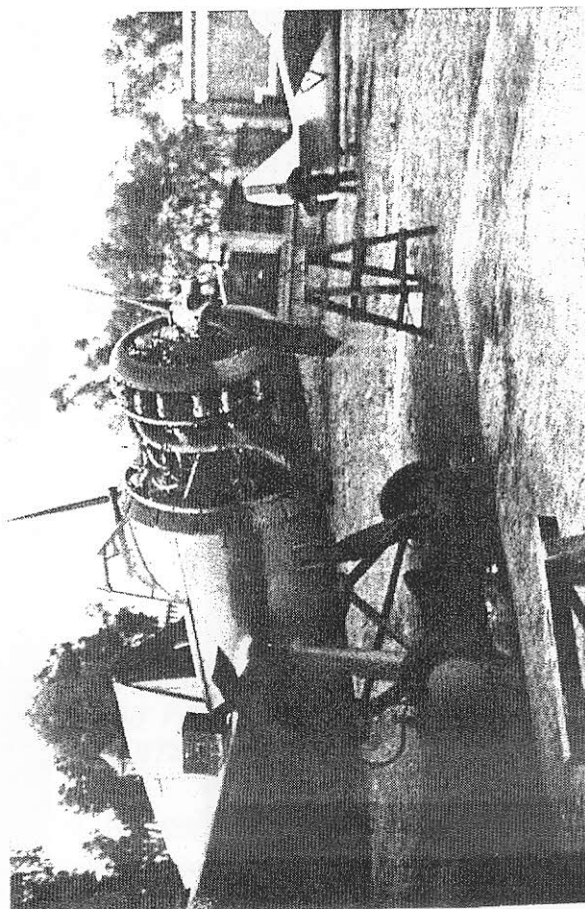
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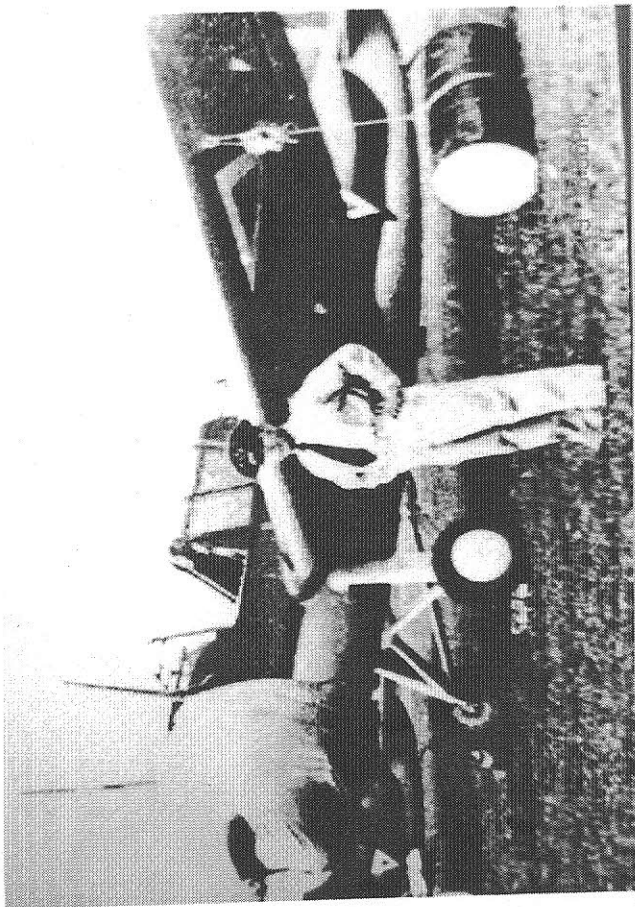


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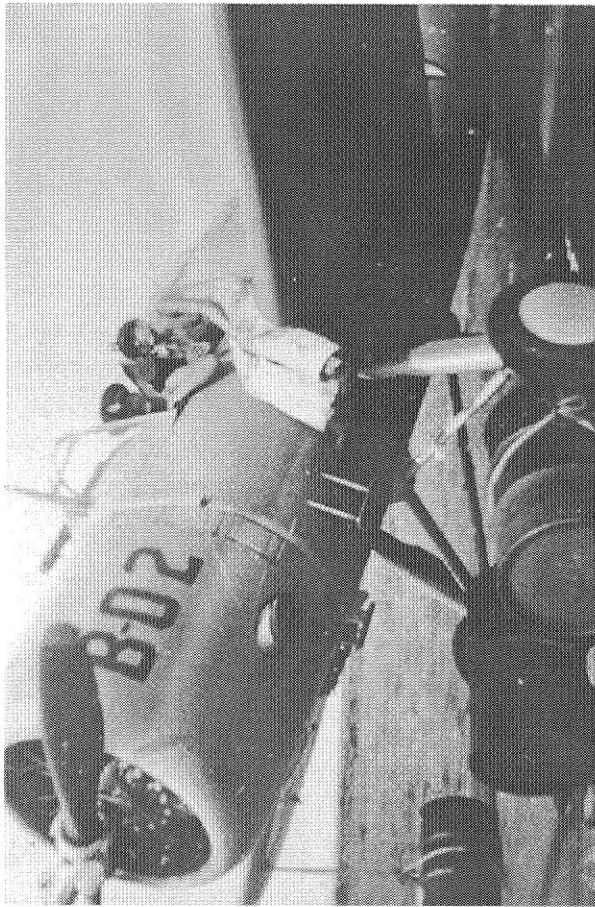


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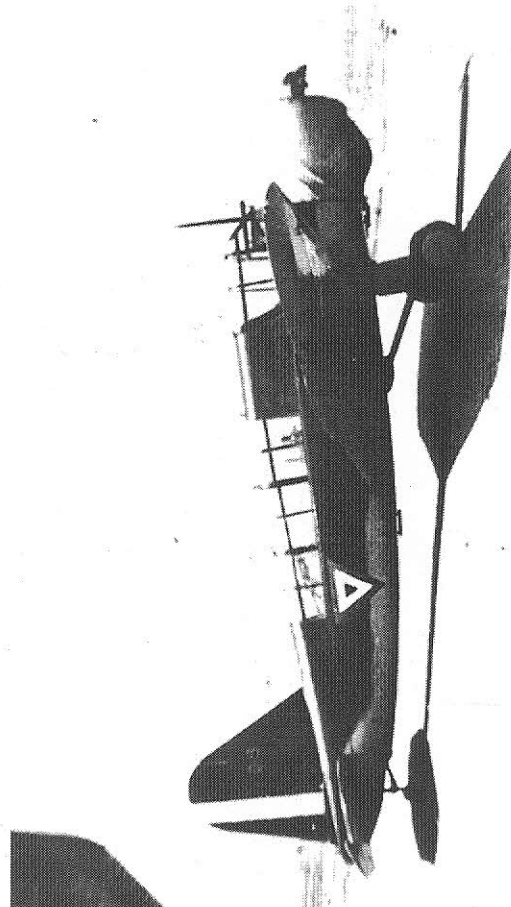




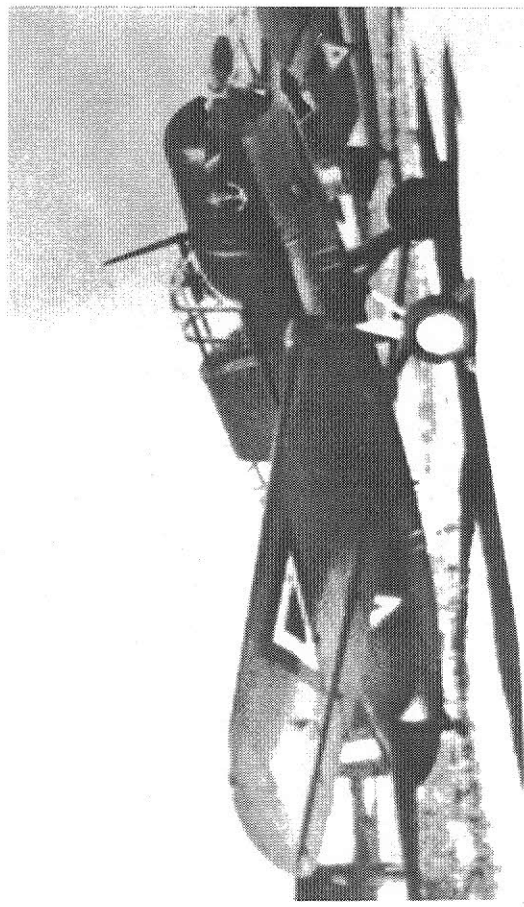
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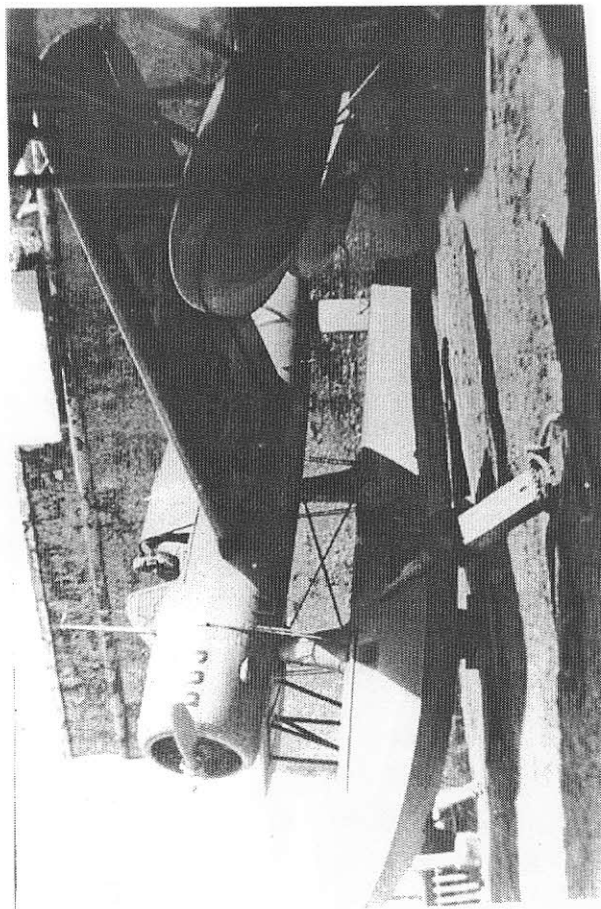
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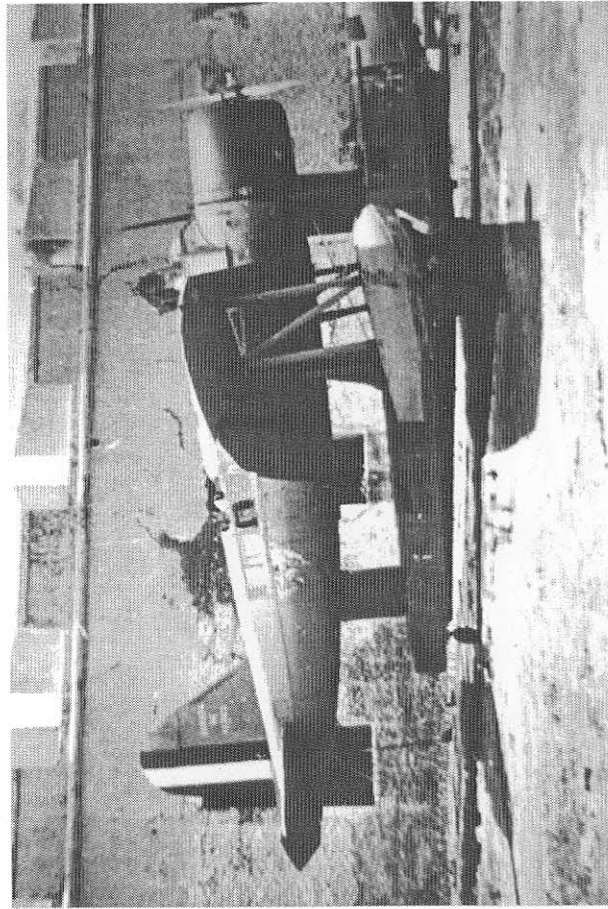
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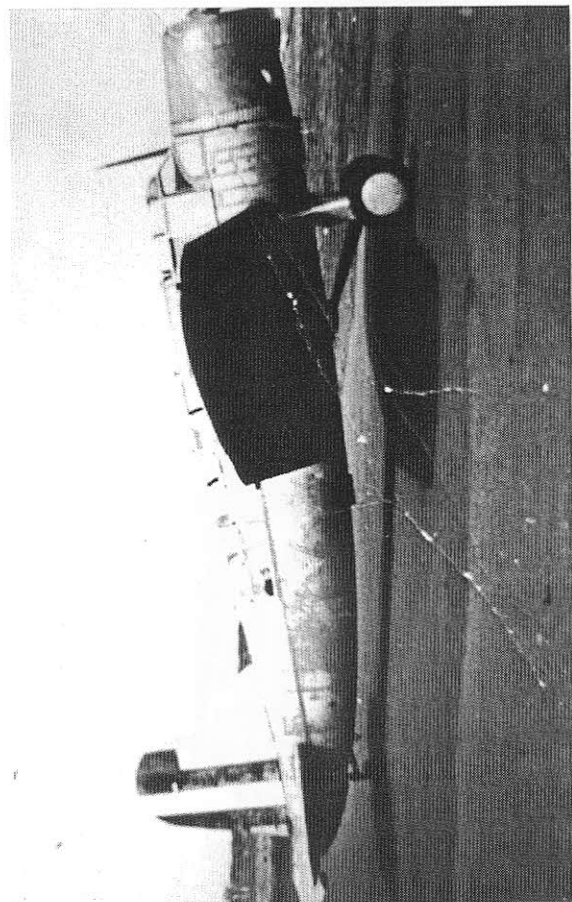
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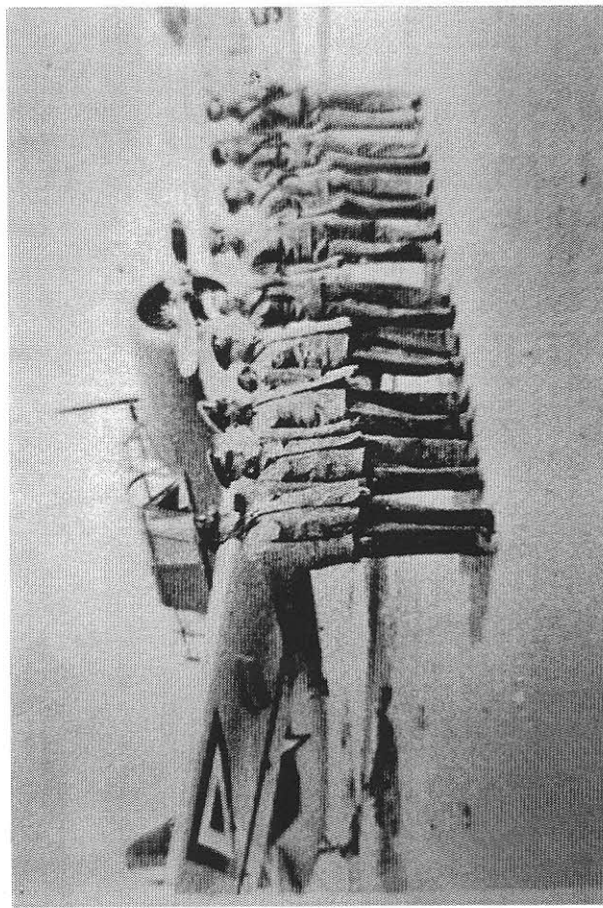
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Aviation School at Balbuena. A small number of aircraft, some converted to floatplanes were flown from the port of Veracruz (to include some Mexican built types like the TNCA Serie A biplane and the Azcarate E trainer).

But the war made it necessary for the navy (Armada De Mexico) to acquire aircraft for its own needs. This would later lead to the creation by Presidential decree of the Escuela De Aviacion Naval (Naval Aviation School) on 1 September 1943.

Another Presidential Decree of 26 February 1943 gave birth to the 1/o. Escuadron Aeronaval to be manned by naval personnel some of whom had learned to fly in Mexico, while others had received their wings in the United States.

Five Mexican Air Force OS2U-3 Kingfishers were handed over to the Navy at Balbuena airfield that same month. The five aircraft were sent to the Aviation Workshops for a complete maintenance check and any necessary work. The following naval pilots were assigned to the 1/o. Escuadron Aeronaval:

Tte. de Nav. P.A. Rafael Santibanez Fernandez (1)

Tte de Nav. P.A. Carlos Cortez Cortez (2)

Tte de Frag. PA Antonio Garcia Carmona (3)

Tte. De Frag. Jose Maza Belmar (3)

Note:

(1) Received his wings in 1929

(2) Received his wings in 1937

(3) Received his wings in 1940

Tte. Santibanez was named commanding officer of the unit, with Tte. Cortez his second in command.

As each aircraft came out of the shops, they were test flown in May 1943. The ground personnel came from different sources, some from the Navy trained by the air force, others were civilians contracted, and some were air force personnel who transferred over or were placed on temporary duty with the Navy.

On 1 June 1943, the 1/o. Escuadron Aeronaval was formed with the ex-Mexican Air Force Kingfishers that received the following naval serial numbers: B-01 to B-05. Later these serials were modified to MB-01 to MB-05 (MB - Marina Busqueda; Navy Search) while other sources cite MV-01 to MV-05 (MV; - Marina Vigilancia; Navy Surveillance). On the vertical stabilizer they carried, for example, the following

## ARM MB-05

ARM: Armada De Mexico (Mexican Navy)  
MB Marina Busqueda (Navy Search)

In mid July 1943, the 1/o. Escuadron Aeronaval was divide into two flights (Escuadrillas), one going to the port of Tampico with the other going to the port of Veracruz. Other sources claim they first operated in the land version and later in the floatplane version.

Their mission was to patrol and protect Mexican and allied shipping in the Gulf of Mexico, their patrol zone being between Veracruz and Port Isabel, Texas. Since the Naval Aviation School didn't have enough instructors, the 1/o. Escuadron Aeronaval was ordered to Veracruz in January 1944 to help train the first generation of naval pilots.

By the end of 1944, a sixth OS2U-3 Kingfisher was handed over to the Navy by the Air Force, this particular machine was delivered in the floatplane version and was given the number MV-06. It was flown by Tte de Frag. P.A. Cirano Sanchez Cardenas.

In 1945, the commanding officer of the unit requested permission to convert some of the Kingfishers to floatplanes, a request that was granted. Kingfishers MV-04 and MV-06 were converted and moved to Playa Norte (North Beach) to be tested by Tte. de Nav. P.A. Carlos Cortez Cortez and Tte de Corb. P.A. Alunmo Joaquin Martinez Gonzalez were selected to fly the aircraft from Playa Norte to the port of Vera Cruz and station the aircraft on a small island on the side of the Castillo of San Juan de Ulua. But the mission did not go well, as related in the history of the unit:

*When landing with aircraft MV-04 they encountered a rail from a railroad track close to the surface of the water. Hitting the main pontoon the aircraft was destroyed and Tte. Cortez suffered serious injuries but Tte. Martinez was not hurt.*

MV-05 and MV-06 were flown to Veracruz the next day by Tte. De Nav. P.A. Santibanez Fernandez and Tte. De Frag. P.A. Genaro Padilla Armegol. Both aircraft were stationed alongside the Castillo of San Juan de Ulua.



In 1945, it was reported that one of the floatplanes was sent to Puerto Cortez in Baja California for search and rescue duties. In March 1945, the Mexican Navy requested via the Joint Mexican-United States Defense Commission in Washington D.C. a complete overhaul and repair of the Kingfishers in any maintenance facilities in the USA., This request included the following provisions:

2. *These repairs will be made in the shops of the US air force designated by the United States.*
3. *The repairs include the motor, armament, equipment, and the body of each of the six planes.*
4. *The repairs could be made on two planes at a time.*
5. *The characteristics of the planes are:*
  - a). *Serial no. from 5720 to 5725.*
  - b). *Numbers of flight hours: 1000.*
  - c). *Armament machine guns "Browning Colt" .30 M2.*

This request was later changed to one for the necessary tools and equipment for the maintenance and repair of the Kingfishers engines. This request was dated 25 May 1945:

1. *The Ministry of the Mexican Navy has in service now 6 OS2U-planes and 2 UC-45 with a total of 10 model R-985-AN-1 Pratt & Whitney motors. These planes are in the patrol service over the Gulf of Mexico and are use for transportation.*
2. *Because of the lack of special equipment and tools that are needed for maintenance and repairs, some of these planes are in poor conditions and cannot be repaired.*
3. *In order to overcome this difficulty and to have adequate repair facilities for those motors that are now out of service, the ministry of the Mexican Navy request through the U.S. Section of the Commission so that proper authorities in the US Navy Department may approve the supply of the needed tools in order to fill the maintenance programs of the 3rd echelon, then the needed equipment in the 4th echelon will be filled by the General Repair Shops of the Mexican Air Force established in Mexico City.*

4. *The tools, apparatus etc. which are needed are listed in the requisitions attached to this memorandum are intended for the shore establishments of the Mexican Navy at the Port of Veracruz, Ver.*

5. *Owing to the importance of the equipment requested so that the best service may be carried out in collaboration with the security of the continent I request your favorable recommendation for this request.*

*Very truly yours,  
For the Majors General Chairman  
Mexican Section  
Ignacio Garcia Jurado  
Rear Admiral*

On 29 May, the following memorandum by Vice Admiral A.W. Johnson USN Chairman, United States Section was sent to Rear Admiral W. O. Spears USN Director, Pan American Division 3407 Navy Department Washington D.C.:

*Subj: tools for maintenance and repair of motors of planes of the Mexican Navy.*

*Enc: (A) Copy of the memorandum 431-N dated 25 May 1945 from the Mexican Section with translation*

*Ref: (a) Memorandum 407-N, 21 March 1945 from the Mexican section to the United States Section.*

1. *In reference {a} The Mexican section requested repairs to motors and bodies of the six OS2U planes now in service. It is believe that inasmuch as no reply has been received from the Navy Department on this request, which was forwarded to the Navy Department on 26 March, the Mexican section has now submitted Requisition 431-N enclosure (A) in the hope of securing the tools with which to make their awn repairs to the motors.*

2. *Information is requested on which to base a reply to this memorandum.*

*A. W. Johnson  
Vice Admiral, USN*

There is no information available to the author, to verify if the Mexican Navy received the items to carry out its maintenance on the Kingfishers.

While these requested were being transmitted, during the period from September 1944 to August 1945, 1/o. Escuadron Aeronaval, had three Kingfishers at Las Bajadas, Veracruz, and the two floatplanes at the Castillo of San Juan de Ulua at the port of Veracruz where a hangar was built. During this time, the unit had flown 10,037 nautical miles with a flying time of 91:15 hours.

From September 1945 to August 1946, 1/o. Escuadron Aeronaval had five aircraft, but only two where in service, while a third could do only limited flights because of the lack of instruments. Two more were under the care of naval personnel.

From December 1946 to December 1947, the squadron had assigned to them 4 Stinson L-5 and 4 Kingfishers at Veracruz, and one Kingfishers at the aviation workshops where B-04 was reported as being broken up. 1/o. Escuadron Aeronaval had flown 389.00 hours.

An Air Study of Mexico Air Intelligence Report No. 100-60/1-62 of 18 June 1947 by the Assistance Chief of Air Staff-2 and the Office of US Naval Intelligence gave the aircraft strength as 5 OS2U, 5 PT-19, and 3 L-5 mostly based at Veracruz.

By September 1949 the aircraft of 1/o. Escuadron Aeronaval at Veracruz was reported as:

*MV-02 in Service*

*MV-001 out of service due to repair*

*MV-003 in service*

*MV-004 out of service disarmed.*

Note the confusion concerning the number of aircraft numbers as shown for the period September 1949 to August 1950:

This same report had MV-06 in service with 2/o. Zona Naval Militar in Puerto Cortez Baja California and 5/o. Zona Naval Militar in Ciudad del Carmen, Campeche. It also stated that 1/o. Escuadron Aeronaval had flown a total of 116.10 hours

By 2 April 1950, two Sikorsky aircraft and one Stinson L-5E were removed from the inventory of 1/o. Escuadron Aeronaval and the Mexican Navy, due to being hard to maintain.

By late 1952, there were four surviving Kingfishers, one reported on floats, with all survivors being assigned to the Naval Aviation School at Las Bajadas, Veracruz. Other sources in Mexico mention that these aircraft were in service until 1958.

Out of six OS2U-3, only one has been preserved.

This Kingfisher is on display on the aft deck of the battleship USS Alabama in Mobile Bay, Alabama, USA. The survivor, MV-03, was found stored on the island of Santa Margarita off the southwest tip of Baja California at a military airstrip. It was presented by the Mexican Navy to the state of Alabama and was flown out in a USAF C-119 Boxcar in November 1964. The restoration was undertaken at Brookley AFB where MV-03 was converted to represent OS2U No.591 of the USS Alabama.

## Sources and References

1. Air Arsenal North America: Aircraft for the Allies 1938-1945. Purchases and Lend-Lease, by Phil Butler with Dan Hagedorn. Midland Press. 2004.
2. Aviacion Militar, Historia de la Fuerza Aerea Mexicana y de la Aviacion Naval, by Manuel Ruiz Romero, Mexico. 2004.
3. Central American and Caribbean Air Forces, by Daniel P. Hagedorn, Air Britain Publication. 1993.
4. Historia de la Aviacion Naval, (author and publication date unknown). Manuel Ruiz Romero files, Mexico City.
5. La Secretaria ae la Aviacion Naval de la Armada de Mexico, Revista de la Marina Epoca IV, No.19, Junio-Julio 1984. Mexico.
6. Lend-Lease to Latin America (Part. II) Navy Aircraft, by Dan Hagedorn, AAHS Fall 1989. USA.
7. Historia de la Aeronautica Naval, Revista de la Marina Ano 12 Ano 66 Enero-Febrero 1993, Mexico.
8. The Mexican Naval Aerial Sombreo, by D Lamarque. Air International, February 1996.
9. Archives of the Aeronautica Naval of Manuel Ruiz Romero, Mexico D.F.
10. Air Classics Vol.2 No.6 May; Vol.8 No.1 November 1971; Vol.13 No.7 July 1977.
11. Boletin Informativo Pioneros, IPMS/Mexico Vol.2 No.2 2a.vuelta, Junio 1992, Mexico D.F.
12. National Archives, Washington D.C.
13. Breve Historia de la Aviacion en Mexico, by Ing. Jose Villela Gomez. Mexico D.F. 1971.
14. El Herald, Tijuana, Baja California: Jueves 19 de Marzo de 1942; Jueves 26 de Marzo de 1942; Miercoles 8 de Abril 1942; Viernes 10 de Abril 1942.
15. Photographic album of Doctor Elorriaga. Mexico D.F.
16. Aviones de la Fuerza Aerea Mexicana de 1912 a 1971, by Ing. Jose Villela Gomez (manuscript in NASM Washington D.C.)

17. Anahuac Organo de la Aviacion Nacional, Vol.1 No.5 Marzo-Abril 1942. Mexico D.F.

18. America Vuela, Notams Department Ano. Marzo 1994 No.15. Mexico D.F.

19. Mexican Air Force pilot's log books: Tte. Ing. Aer PA Jesus Carranza Hernandez; SubTte .P.A. Jacobo Estrada Luna; Capt. 1/o. P.A. Roberto Salido Beltran.

20. Personnel file of General de Division PA Gustavo Salinas Camina. Mexican Air Force Archivos de Cancelados Secretaria de la Defensa Nacional. Mexico D.F.

21. Memoria de la Secretaria de Marina Presentada por el C. Secretario del Ramo General de Division Heriberto Jara C.. Septiembre 1945 a Agosto 1946. Mexico D.F.

22. Memoria de la Secretaria de Marina Septiembre de 1944 a Agosto de 1945. Mexico D.F

23. Memorias de la Secretaria de Marina, Presentada por el C. Subsecretario Encargado del Despacho, Contraalmirante Luis Schaufelberger Diciembre de 1946 a Diciembre de 1947. Mexico D.F.

24. Memoria de la Secretaria de Marina, Presentada por el C. Subsecretario Encargado del Despacho Ingeniero Alberto J. Pawlmg, Septiembre 1949 a Agosto 1950. Mexico D.F.

25. OS2U Kingfisher in Action, by AI Adcock, Aircraft Number 119, Squadron/Signal Publications. 1991.

### Captions for Photo on pages 125-128

1. A poor photo of 5 of the 6 Vought OS2U-3 Kingfishers on their arrival at Balbuena airfield 25 March 1942. The second aircraft shows the American star over-painted with the Mexican circular insignia. (Ing. Jose Villela Gomez)
2. Mexican officials and pilots gather next to a newly arrived Vought OS2U-3 Kingfisher at Balbuena airfield. From left to right: General de Division Pablo Mancias Valenzuela; Capt. 1/o. P.A. Pablo Avelar Rubio (pilot); President General de Division Manuel Avila Camacho; General de Division Salvador S. Sanchez; General de Division Leobardo C. Ruiz; General P.A. Roberto Fierro Villalobos (chief of the Air Force); Capt 1/o. P.A. Felix Cabanas Hernandez (pilot). (Sr. Manuel Ruiz Romero)
3. The Kingfishers after their arrival at El Cipres, Ensenada, Baja California, April 1942, showing No. 73, 72, 71, 70 and 69. (Ing. Enrique Velasco)

4. Kingfisher OS2U-3 No.74 with the 1/o. Regimiento Aereo at El Cipres, Ensenada, Baja California, 1942. (Ing. Enrique Velasco)
5. Kingfishers OS2U-3 No.73 and 74, after their arrival to the 1/o. Regimiento Aereo, El Cipres, Ensenada, Baja California 1942, ( Ing. Enrique Velasco).
6. Vought OS2U-1 Kingfisher OZS-4502 undergoing maintenance at the Military Aviation Workshops in Mexico City. (Ing. Enrique Velasco)
7. A Vought OS2U-1 Kingfisher of Squadron 206 flying low over one of its bases either at Merida. Yucatan. or Cozumel. Quintana Roo. in the post-war years. (Ing. Enrique Velasco)
8. An OS2U-1 Kingfisher under repair at the Air Force Military Aviation Workshops in Mexico City. (Ing. Enrique Velasco)
9. A Mexican naval pilot of 1/o. Escuadron Aeronaval next to a Vought OS2U-3 Kingfisher tied down with 55 gal. drums - probably at Tampico, 1943-1944. (Ing.Enrique Velasco)
10. Two Mexican naval personnel with Kingfisher B-02 of 1/o. Escuadron Aeronaval - probably at Tampico. (Ing. Enrique Velasco)
11. A Vought Kingfisher OS2U-3 of the future 1/o. Escuadron Aeronaval with the number 0-3 on the vertical stabilizer, Note the 0.30 cal. machinegun in the observer's position. (Ing. Enrique Velasco)
12. A Mexican Air Force OS2U-3 Kingfisher soon to be handed over to the Mexican Navy - probably at Balbuena airfield. Note the anchor painted on the cowling. (Ing. Enrique Velasco)
13. Tte. de Frag. P.A. Jose Maza Belmar in the cockpit of Vought OS2U-3 Kingfisher B-05 of 1/o. Escuadron Aeronaval based on the grounds of the Castillo de San Juan de Ullua at the port. of Veracruz, 1944-1945. (Ing. Enrique Velasco)
14. A badly battered OS2U-3 Kingfisher of the Mexican Navy in its land version - probably after the type was retired from the service. (Ing. Enrique Velasco)
15. Another badly battered OS2U-3 Kingfisher floatplane version, out of service in the Castillo de San Juan de Ulua - probably after the type was retired from the service in the 1950's (Ing. Enrique Velasco)
16. Mexican naval ground personnel in front of a newly delivered OS2U-3 Kingfisher for the 1/o. Escuadron Aeronaval at Balbuena airfield, Mexico City, 1943. (Manuel Ruiz Romero)



# The Hellenic Sentinels

Stamatis J Andreou

[Editor's Note: This article is an amended version of an article by Ilias Korombilis that appeared in IPMS/Greece's magazine NEA 2/94.]

The Stinson L-5 Sentinel was a light two-seater aircraft that was developed in the US in the late '30s for observation and liaison duties. The engine was a Lycoming 0-435-1 (190 hp) and it had a length of 7.34 m, a span of 10.36 m and a height of 2.16 m. It was able to carry a 200 lbs cargo. Designated 0-54 (for observation) in the early stage and 0-62 soon after, it was redesignated L-5 (for liaison) in 1942. The USAAF used it extensively in the European and Pacific theaters (1939 - 45) and later in the Korean War. More of 3,000 were built, most of them of the L-5 (or L-5A) subtype for the observation role. 679 more airframes were of the L-5B ambulance role, able of carrying a stretcher. L-5C had provision for a K-20 recce camera, L-5E had STOL capabilities and L-5G featured a little different engine. The USN and USMC used the OY-1 and OY-2 variations, manufactured by Consolidated/Convair with a different glazing and wheel struts and able of carrying bazookas under the wings for ground attack.

After WWII, both the UK and the US supplied the Royal Hellenic Air Force (RHAF) with various aircraft types from their stocks in order to help it reorganize and to fight against the so-called "Republican Army of Greece" during the Civil War (1946-49). The Sentinel was one of these types. According to official documents, seven airframes were delivered to Greece (16/10/46) without any spare parts or technical manuals. The RHAF used the type in the liaison (and maybe in the observation role) until the late '40s or early '50s.

The existing evidence is very sparse and most probably only a few of the machines were ever operated, while the rest were used as a source of spare parts. There is a photo of a few servicemen posing in front of the starboard side of Σ38 (Larissa, 1948) and another one with the same machine in front of a hangar at Hassani/Elliniko. Inside the hangar one can see Σ74 with its nose down, the wing, tailplanes and rudder removed (cannibalized?).

Ilias Kartalamakis (then CO of 335 Sqn) in one of his books refers to a happening on 24/4/47 when, after two offensive recce sorties, he took off again

together with the chief engineer of the squadron) with Σ21 from Larissa for Salonica/Sedes to deliver, after an adventurous flight, a bag of bread loaves for his airmen.

"

Bu No	Type	RHAF	Comments
(4) 298817	L-5	Σ17	?
(4) 298821	L-5	Σ21	Operational 335 Sqn
(4) 299528	L-5	Σ28	?
(4) 417072	L-5B	Σ72	?
(4) 417074	L-5B	Σ74	* Cannibalized?
(4) 417338	L-5C	Σ38	* Operational
(4) 417341	L-5C	Σ41	?

\* A photo exists of this machine.

## Colors and Markings

The machines were matt aluminum overall without antiglare panel. On fuselage side there was the dark blue/white/dark blue roundel followed by the black code (e.g. Σ38) and there was a fin flash of the national colors on the vertical stabilizer. Most probably there were also roundels over and under the wings (this is not clear from the photos).

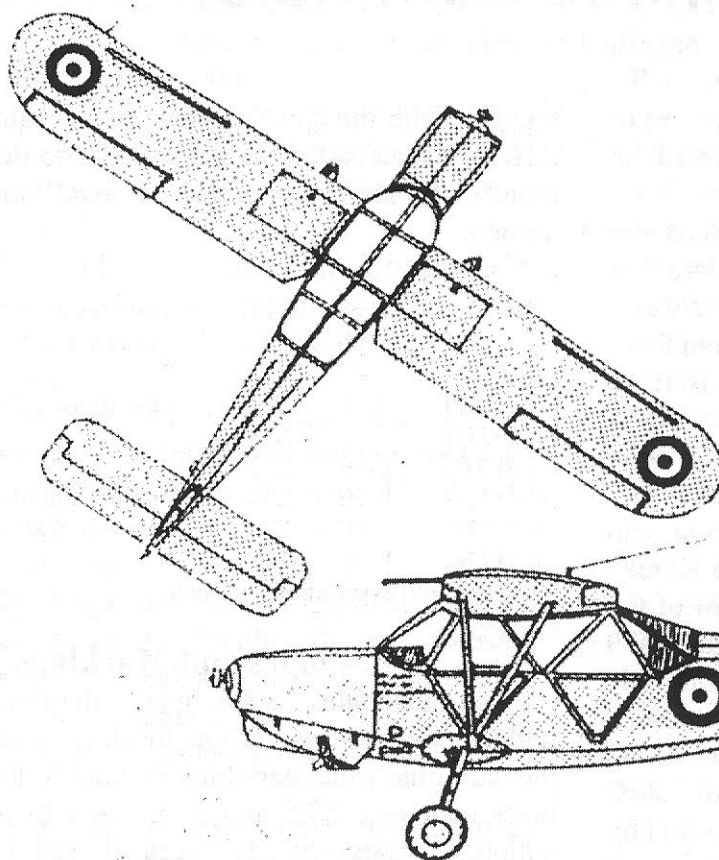
It is strange that the Greek letter Sigma (Σ) was used on these L-5. Before WWII, this letter was carried by RHAF army-cooperation aircraft, but it use was scheduled to be discontinued after the war.

## Modeling

Four kits of the Sentinel have appeared in 1/72 scale:

1. A resin kit by Czechmaster (no painting instructions or decals.)
2. A vacuform kit by Raremodels (no decals).
3. A limited-run kit by Beechnut (in a strange glossy-yellow hard plastic (no painting instructions, poor quality decals). The latter two needed a bit of scratch building.
4. Recently, a limited-run kit of accepted quality by Sword also appeared, but it appears to be out of production.

2 Lt Stamatis J. Andreou (HAF)  
SAFCH #1602  
IPMS Hellas #580



Roundels (also under the wing) and fin flash are in d. blue (FS 15044) - white - d. blue

The correct fuselage side code is 'Σ38' (in black) – not 'Σ78'

Drawing by Ilias Korombilis -

Photo via Yiannis Tripitsis -







**Czechoslovak Prototypes 1938 (Vol. 2)**, by Pavel Kučera. Jakab #9. 112 A-4 size pages, 138 photos, and 7 color 2-views;. Softbound. (2007) Czech/English text. ISBN 978-80-903637-9-3. Published by Jiri Jakab, Nevojice 144, 685 01 Bucovice, Czech Republic. E-mail: jakab@razdva.cz.

In the October 2006 issue of SAFO, I reviewed the first volume of this series on prototype aircraft built and tested in Czechoslovakia immediately before the dissolution of the Republic. This initial volume covered the twin-engine Aero A-204, 304, and 300. I gave this book high marks on the excellence of the research, the unique photos, and the colorful illustrations. However, I was less satisfied with the fluency of the English translation. Well, as the old adage goes, "Watch what you wish for; it may come true". My offer to "edit" the translation of the second volume was accepted and I soon found how difficult it is to translate technical terms from one language to another. I hope the reader of the second volume will find the English a little easier to read.

Volume 2 covers three more twin-engine prototypes: the elegant twin-boom ČKD (Praga) E-50, and the funky-looking, but strangely-attractive, Avia B-158 and Letov Š-50 bombers. Each aircraft is introduced with a detailed history of the company that includes the design and testing of the aircraft that

were the ancestors of the prototypes. These aircraft were flight tested, by none of these designs achieved production status. (I've always considered myself well read on CZ aircraft, but I was surprised how little I knew about the history of the companies.)

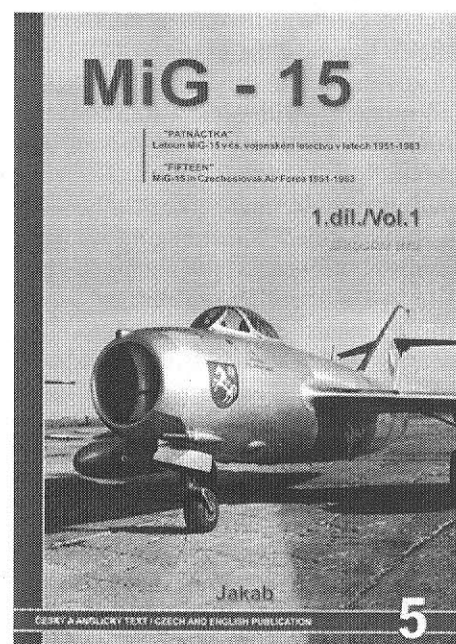
The Praga E-51 was a twin-boom aircraft with a central gondola similar to the Fokker G-1 and Fw 189. But, in this reviewer's opinion, it was a much more attractive aircraft that either of these look-alikes. The twin-tailed B-158 was powered by two inline water-cooled engines and had a retractable undercarriage. Its elegant lines were spoiled by the hunch-back appearance of the fuselage. Of the three, the Š-50 was furthest along at the time of the occupation. Powered by two air-cooled radial engines, with twin tails and fixed landing gear, it lacked esthetic appeal, but from some angles, particularly from above, it looks quite modern. The Š-50 was the only one of this trio that received the multi-tone camouflage adopted by the Czechoslovak air force immediately before the occupation. It was taken over by the Nazis and displayed at the 1939 Brussels International Air Show wearing German swastikas, but with a small CZ flag flying from the cockpit.

The E-51 coverage consists of 34 pages including 67 photos, a 3-page multi-view scale drawings (with cross sections), and a color 2-view drawing. The B-158 coverage consists of 26 pages including 29 photos, a 3-page multi-view scale drawings (with cross sections), and a color 2-view drawing. The Š-50 coverage consists of 36 pages including 53 photos, a 3-page multi-view scale drawings (with cross sections), and a color 2-view drawing. Appendices include biographies of the principle designers, a time-line chart for each prototype with the Munich Crises and the occupation marked, and a table comparing technical data for contemporary international aircraft of the same class.

The physical nature of the book is as good as its contents: Sturdily bound, high-quality glossy paper, excellent photo reproduction, and brilliant color illustrations.

The two volumes of this series are highly recommended to all aviation enthusiasts interested in the nitty gritty details of prototype development from initial design, to wing-tunnel testing, to construction of the mockup and prototype, to flight testing. (It's amazing how much modification goes on during flight testing.) It goes without question that the student of Czechoslovak per-WW2 aviation will find these books indispensable. The modeler will curse his inability to scratch build these aircraft and will have to be satisfied with wishing that some day kits of these aircraft will appear. (I think resin kits of the E-51 and Š-50 were produced by RS Models of the Czech Republic, but their availability is unknown.)

Review copy provided by Jiří Jakab of Jakab Publishing.



**MiG-15 in Czechoslovak Air Force 1951-1983 (Vol. 1)**, by Miroslav Irra. Jakab #5. 104 A-4 size pages (8 in full color); 7 color side-views; 165 b/w photos. Softbound. (2006) Czech/English text. ISBN 80-903637-4-1. Published by Jiri Jakab, Nevojice 144, 685 01 Bucovice, Czech Republic. E-mail: jakab@razdva.cz.

This is the first of a three volume series on the MiG-15 in Czechoslovakian (CS) service. Beginning in the early 1950s, the CS aircraft industry built 3354 MiG-15s of which 1220 were employed



by the CS air force; the remainder were exported. With a service life of 32 years the MiG-15's longevity in Czechoslovakia was surpassed only by the MiG-21 (although the latter served in much smaller numbers).

The first 36 pages (including 63 photos) are devoted to the conversion of Czechoslovak fighter pilots to jet aircraft and the rapid buildup of the MiG-15 units. One incident is particularly revealing: In response to the "spontaneous uprising of people against communist power in Hungary. Measures taken by CS aimed at containing the situation in this country, first by closing the state border with Hungary. On 25/10/1956 units of some fighter regiments were moved from peacetime barracks to reserve airfields. .... In the meantime, events in Hungary were drawings to an end, when the Red Army firmly crushed the uprising in a blood-bath, and the fighter alert could be cancelled at 16:00 pm on 13/11/56 and air units were withdraw from the reserve airfields to peacetime bases on 14/11/56. ... Individuals who dared to express open disagreement with the Red Army methods in Hungary were posted to reserves."

The most exciting part of the book is the section titled "Guarding Peace and Socialism" (26 pages, 19 photos, and 5 maps). This section describes with statistics and detailed accounts the reactions of MiG-15 to air-space violations by Western military and civilian aircraft as well as the interception of aircraft attempting to flee from Czechoslovakia to the West. Based on the author's exhaustive research in both CS and Western archives, two incidents are described in great detail. One describes the shooting down of a USAF F-84 and the subsequent diplomatic exchanges (9 pages). The other describes the damaging of an unidentified US aircraft, probably a USN AD-4. The fates of aircraft attempting to flee CS are also described in great detail, including the name of the pilot, type of aircraft, and its civilian registration. [Ed: Now here's an idea for the modeler's "Dogfight Double" collection: a CS Mig-15 against Piper Cub 'OK-AOD']

The third section, "The Twilight Years" (14 pages 36 photos) describes the run-down of MiG-15 operations between 1958 and 1970.

The final section, "The End is Near" (10 pages, 30 photos) includes the descriptions on two interesting events: "In December 1971 the ex-champion in aerobatics L. Bezák and his family took off in a Z-226T aircraft with a view to fly over to FRG. A Mig-15 on standby with the 5<sup>th</sup> slp (fighter air regiment), piloted by Capt. J. Fiedler, was sent to take action against Bezák and force him to land using a signal flare and warning shots. Despite his report to CP that children were on board, he was given the order to shoot down the escaping 'Trainer'. Before Capt. Fiedler managed to attack again, Bezák vanished in clouds and luckily landed in Nuremberg. Whether the pilot of the MiG helped him in this by deliberately neglecting the order, we will never know, as Capt. Fiedler is no longer alive". The second incident, also thoroughly described is the interception and forcing down of an Austrian AB-204B helicopter '4D-BT' on 23/5/1978. [Ed: Another Dogfight Double subject?]

The appendices include 6 color profile drawings, one color 4-view drawing, 2 color photos of Mig-15 in service, 14 color photos of exterior and interior details of museum MiGs, and 8 pages of photos and sketches from an Maintenance Manual.

Sprinkled throughout the text are examples of the instructions provided to the CS pilots. One that particularly caught my fancy was the orders to pilots brought down in "enemy" territory: "*The CS service pilots should at all costs preserve his high political and moral supremacy over the deceitful, false and fraudulent manners of imperialistic and fascist agents.*"

The English translation is excellent and a joy to read.

The first volume in Jakab's series on MiG-15 in Czechoslovak service is a beautifully produced book that can be highly recommended to anyone interested in the aerial activities along the Iron Curtain during the Cold War.

Review copy provided by Jiří Jakab of Jakab Publishing.

**MiG-15 in Czechoslovak Air Force 1951-1983; Vol. 2.**, by Miroslav Irra. Jakab #8. 104 A-4 size pages (16 in full color); 12 color side-views; 115 photos. Softbound. (2007) Czech/English text. ISBN 80-903637-7-6. Published by Jiri Jakab, Nevojice 144, 685 01 Bucovice,

Czech Republic. E-mail: jakab@razdva.cz.

The first volume in this series described the service history of the MiG-15 in Czechoslovakia. In that volume, the MiG-15 is frequently denoted as a S-102, S-103, or other CS designations without any explanation. This second volume handsomely rectifies the situation with an exhaustive study of the many types of MiG-15 in Czechoslovakia service:

The S-102 (**MiG-15**) clear-weather interceptor is described in 20 pages, 13 photos, a two-page 5-view scale drawing, and 9 pages of tables; one listing the history of each individual S-102, and the other the serial numbers of MiG-15 built for Poland, Bulgaria, and Romania.

After the introduction of the MiG-19, the now redundant S-102s were converted to the ground-attack role and designated **MiG-15SB**. These are described in 6 [pages including 9 photos.

The need for an aircraft to tow at jet-plane speeds resulted in the conversion of some S-102 to **MiG-15T** target-towing aircraft (2 pages including 2 photos.

The two-seat CS-102 (**UTI MiG-15**) receives 10 pages including 6 photos, a 1-page 5-view scale drawings, and 6 pages of tables listing histories of CS-102 service and details of UTI-15 exported to USSR, Poland, Bulgaria, Romania, Hungary, Egypt, Syria, East Germany, China, and Indonesia.

The radar equipped **UTI MiG-15P** is described in 6 pages including 9 photos.

The second largest number of MiG-15 produced in CS was the S-103 (**MiG-15bis**). It is described in 12 pages, 8 photos, and 9 pages of tables listing the history of individual S-103 and exports to Bulgaria, Egypt, Syria, and East Germany.

The target-towing **MiG-15bisT** is described in one page including 2 photos.

The photo-reconnaissance **MiG-15bisR** receives 4 pages including 3 photos.

The ground attack **MiG-15bisSB** is covered in 2 pages including 3 photos.

This book is possibly the most comprehensive discussion of MiG-15 variants available in the English-language literature. However, the 26 pages that follow are even more interesting "Armament and its Use" is divided into three sections:

"Cannon and Guns: (14 pages including 29 photos) describes in great detail five guns (N-37, ND-32KM, NR-

32, UBK-E, & A-22.7) and their ammunitions. As an example of the detail, "Both 12.7 mm guns could effectively aim and shoot to a distance of ca 800 m using armour-piercing incendiary B-32 ammunition (projectiles were marked with black on the point and a red stripe) ... the projectile had a steel core and its tip is filled with a combustible mixture which ignites on impact with armour. When the armour is penetrated, the already burning combustible filling is forced inside the target by the core." A table lists the technical data for each gun: e.g. A-12.7, weight 28 kg, rate of fire 800-1100 rounds/minute, muzzle speed 785-820 m/s, ammunition weight 42-49.5 g, penetration 15-20 mm at 200 m, and barrel life 4000 rounds. Also described in this section are firing ranges, and tow targets.

"Bombing Munitions" (4 pages including 5 photos and 3 scale drawings).describes three bombs (OFAB-100-80, OFAB-100M, & FOTAB-100-80.

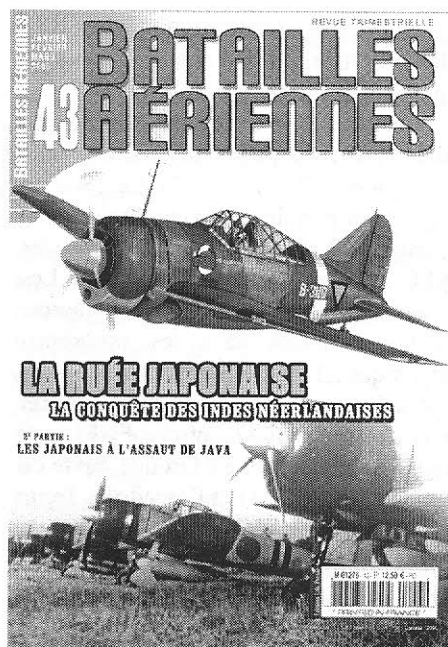
"Rocket Munitions" (7 pages including 11 photos) describes the development of rockets in CS and gives technical data on 18 types of rockets.

The appendices include a list of all CS-built MiG-15 preserved in CS and around the world.

Color profile drawings: UTI MIG-15 'FT-57', S-103 'LN-01', MiG-15SB '1303' with blue checks, radar-equipped MiG-15bisSb '3058', MiG-15bis '3707', UMiG-15bis '3934' with blue strips for air-combat maneuvers. A 4-view color drawings: MiG-15bis '3234' of Capt. Oldrich Paldus aerobatic-team leader.

Despite what might at first appear to be a dull subject, Vol. 2 for the Czechoslovak MiG-15 story turned out to be a fascinating read. The excellent English translation explains the some times complicated technical details in easily understandable terms. Anyone interested in aircraft and their armament will find the book fascinating.

Review copy provided by Jiří Jakab of Jakab Publishing.



**La Ruée Japonaise: La conquête des Indes Néerlandaises (2e partie): Les Japonais à l'assaut de Java**, Batailles Aeriennes #43. Eighty A4 pages including 135 photos and 26 color profiles. Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. Email: [contact@avions-bateaux.com](mailto:contact@avions-bateaux.com). Website: [www.avions-bateaux.com](http://www.avions-bateaux.com).

The eagerly awaited second volume of Lela Presse's series on the Japanese conquest of the Dutch East Indies has arrived – and the wait has been well worth it.

I've always been interested in this campaign; I lost a relative on the USS Houston when it was sunk in the aftermath of the Battle of Java Sea and I was pleased to see several photos of the USS Houston in the book. I've read all I could about this campaign. And, these two volumes did not disappoint me. Although I have a very limited facility with the French language, the photos and color profiles made up for any difficulties I had in deciphering the text and photo captions.

Some idea of the breath and depth of the coverage can be gained for a listing of the section headings: La défense aérienne de Java; La grade attaque du 3 Février 1942; 5 Février 1942: nouvelle épaves, preuve pour les defenseurs de Java; Coups durs pour allies: la perte de baliet de Timor; Les japonais débutent leurs attaques contre l'ouest de Java; Le 20 Février; Le 21 Février; Les opérations du 24 Février; Dans l'après-midi, les avions japonais reviennent à l'attaque;

L'invasion imminente; Dernières opérations avant l'invasion de Java: du 26 au 28 Février; L'USS *Langley* est coulé; Les opérations aériennes du 28 Février 1942; Les japonais débarquent à Java; Attaques es des avions alliés sur Eretan Wetan; La perte de Kalidjati; Les attaques aériennes de l'après-midi; Les événements à l'est de Java le 1<sup>er</sup> Mars; Opérations aériennes du 2 Mars 1942; Résumé et résultat des combats terrestres; Les hydravions du *Recgroup* évacuent Java; Drame à Broome; Suite des combats aériens: Andir est attaque; Andir attaque pour la seconde fois; Échec de la *KNIL* le 3 Mrs; 4 Mrs: Le commencement de la fin; Nouvelle attaque aérienne sur Adir; 5 Mars:les japonais attaque Tjiater; 6 Mars: les japonais forcent le passage; Vers la capitulation; Conclusion; Annex 1: les grades.

The excellent color profile drawings: are: Brewster B-339D (2); Consolidated PBY (1); Curtuss Hawk 75A (2) & P-40 (1); Curtiss-Wright CW-22 (2) & CW-21B; Dornier Do 24K (1); Hawker Hurricane (1); Kawasaki Ki-48 Lily; Lockheed Hudson (1) & Lodestar (1); Martin 139WH (3); Mitsubishi C5M2 Babs (2), G4M1 Betty (1), F1M2 Pete; A6M2 Zero (2); & Ki-51 Sonia; Ryan STM (23);

This book and the first part (Batailles Aeriennes #42), are enthusiastically recommended to all students of the Pacific War. Any difficulties with the French-language text is more than compensated for by the wealth of never-before published photographs. As is typical for the Batailles Aeriennes series, the inclusion of sections on the sea and ground activities greatly add to the understanding of the events.

The modeler will also benefit from the multitude of color schemes and markings. In particular, the modeler searching for an inspiration for a theme "collection" can do no better than the aircraft that fought in the defense of the Netherlands East Indies. Injection molded 1/72-scale kits are currently available for the Brewster B-229, Curtiss Hawk 75, Curtiss-Wright CW-21, Ryan STM (both float and wheels), Martin 139, Dornier Do 24, Consolidated PBY Catalina, and Hawker Hurricane. If you get all these done before next month's club meeting, you might consider extending the time period on both ends to include a Dornier Wal and a B-25



Mitchel, P-51 Mustang, and Fairey Firefly.



**Les aviateurs de la France libre (1<sup>re</sup> partie): De la dissidence aux Forces aériennes françaises libres**, Ailes Françaises 1939-1945 #7. One hundred A4 pages including 137 photos and 47 color profile drawings. TMA SARL, 75 rue Claude Decaen, Paris 75012, France. Email: [airmagazine@wanadoo.fr](mailto:airmagazine@wanadoo.fr).

The *Forces aériennes françaises libres* (FAFL) was made up of pilots and other aviation personnel who, in defiance of their government's order to desist resistance to the invading Germans, joined the Allied cause under the leadership of General Charles de Gaulle. While many of their brother aviators remained loyal to the puppet Vichy government of Marshal Petain, they served alongside the Allies in all theaters of the war: Great Britain, Palestine, Egypt, Aden, sub-Saharan Africa, and Oceania. They flew a great variety of aircraft of both French and British origin. Some of these aircraft continued to carry the French national insignia, others carried RAF roundels, frequently along with the Free French Cross of Lorraine.

This, the seventh volume in TMA's series on *Ailes Françaises 1919-1945*, covers the story of the FAFL from the arrival of the first aircraft on British soil after the capitulation of France to the

fighting in the North African desert. The following listing of the chapters will give some idea of the coverage:

Chapters: (1) *Ordre de bataille des unités FAFL* – 2 pages; (2) *Les evasions* – 12 pages, 12 photos; (3) *Les French Flights, les premières unités dissidentes* – 10 pages, 12 photos; (4) *La création des FAFL* – one page, one photo; (5) *Les écoles de pilotage* – 10 pages, 16 photos; (6) *Les Français dans les squadrons britanniques* 27 pages, 46 photos; (7) *Les pilotes marins au sein de la Fleet Air Arm de la Royal Air Force et des FAFL* – 9 pages, 20 photos; (8) *Le Groupe mixte de combat n°1 (GMC 1) et l'escadrille Topic* – 6 pages, 14 photos; (9) *Le Détachement permanent des forces aériennes du Tchad* – 3 pages, 3 photos; (10) *Le Groupe de bombardement n°2 Bretagne et le deux campagnes du Fezzan* – 5 pages, 7 photos.

The usual TMA Fiche Monographique covers the Potez 63-11 (3 pages including 4 photos and a scale 4-view drawing), and the Morane 230: (3 pages one photo, a scale 4-view drawing, and table of serials.)

The variety of aircraft types and markings employed by the FAFL is illustrated in well-reproduced photos and beautiful color profile drawings. These profile drawings (a \* indicated a/c shown carrying either a red or blue Cross of Lorraine) are: Bristol Blenheim IV\* (1) & Blenheim V\* (1); CAMS 37; Caudron 445 (1) and Luciole\* (1); Dewoitine D.520 (1); Farman 222 (1); Fiat CR.42\* (1); Gloster Gladiator\* (1); Hawker Hurricane (7) & Typhoon (1); Loire 130 (1); Martin 167\* (1); Moraine-Saulnier MS.406 (5); Potez 25\* (1), 29\* (2), 63-11 (6), & 540 (1); Short Sunderland (1); Supermarine Spitfire (8); Westland Lysander\* (3).

This book is recommended to everyone interested in the history and aircraft of the Free French. The modeler will find several interesting subject to apply the Cross of Lorraine. A facility of reading French will greatly enhance the value of this book for everyone.

**La Campagne de Pologne**. Ciel de Guerre Dorriers #5. One hundred A4 pages including 124 photos and 43 color

profile drawings. TMA SARL, 75 rue Claude Decaen, Paris 75012, France. Email: [airmagazine@wanadoo.fr](mailto:airmagazine@wanadoo.fr).

The German invasion of Poland on 1 September 1939, and the following September Campaign, are arguably one of the most well covered aerial campaign of WWII – second only to the Battle of Britain. Therefore, one must ask, "Do we really need another book, particularly one in French?" If the book is well done, gathers together in one volume many familiar photos, includes many previously unpublished photos (unknown at least to the reader), and is illustrated with an eclectic collection of beautiful color profile drawings, then the answer may well be, "Yes".

Let's see what this book has to offer: Chapters: (1) *Pologne: une attitude ambiguë* – 4 pages, 6 photos.

Color profile drawings: PZL-11a (3), PZL-11c (11), PZL-23B Karas (5); & PZL-37B (4); RWD-XIIIter (2) & RWD-8 (3); Dornier 17E (2), Do 17M (1), & Do 17P (1); Heinkel He 111E (1); Junkers Ju 87B (4); and Messerschmitt Bf 109D (2), Bf 109E (1), Bf 110C (2).

If you have a relatively complete library on the September Campaign and do not have a ready facility for the French language, you might not want to obtain *La Campagne de Pologne*. However, if you are intent on collecting as many photos from this campaign as possible, you will possibly find more than a few photos that will be new to you. On the other hand, if you know little about the September Campaign and have a smattering of knowledge of the French language, this book could be a useful addition to your library.

The modeler who has not yet added Polish a/c to his collection, could use this book as an inspiration for a thematic collection. The P-11c, P-23, P-37, RWD-8, and Lublin R-XIII are all available as injection-molded kits in both 1/48 and 1/72 scale.

[Editor's note: An excellent 1/48-scale kit of the RWD-8 is available from the SAFCH Sales Service for \$8.00 plus \$2.00 postage in the USA or \$4.00 outside the USA.]



# Aviation History Colouring Book

Ian K. Baker, 31A Mercer St., Queenscliff, VIC 3225, Australia. Booklets are obtainable by mail order to anywhere direct from Ian Baker. Prices vary, most being around A\$10-A\$15 within Australia. Many previous issues still available. Booklets are also stocked by several specialist bookshops and hobby shops. Find them on the Internet. USA: M&Models (Illinois). UK & Europe: Mushroom Model Publications (Herts). NZ: NZ Models (Invercargill).

There is no better way to describe the content of Ian Baker's *Aviation Colouring Books* than to use Ian's own description which are always factual and completely lacking in "PR" exaggerations:

"In this trio of booklets come nineteen aeroplanes shown in carefully studied side- and top-view drawings accompanied by notes and discussions on each. Some of their colour schemes and markings may come as a surprise to readers who are not students of this subject. Additionally, some of these aeroplanes have a significant place in early aerial warfare history.

"There is a full description of the evolving and changing RNAS national insignia worn through the first two years of World War One. It was very different from the RFC until late 1915, and then often like the French *cocarde* for a time after that!

"Of course the subject of dopes and protective finishes, their colours and colour variations, is given attention. RNAS aircraft could not be given PC-10 & PC-12 until some time in 1917, so what was their colour appearance like? There is a sizeable *Colour Notes* section matching colours to FS, Methuen, Pantone, and BS standards.

"Several of the aeroplanes drawn and described in these booklets were involved in aerial operations accompanying the ill-fated Dardanelles and Gallipoli enterprises. Included is an article about this. It seems the whole catastrophe was set on its course because the Royal Navy over-estimated what aircraft were capable of achieving! "We also consider a rarely-discussed markings anomaly seen on some *French* Sopwith Triplanes and show one of the most dazzling DH4s.

"The *Aviation History Colouring Book* series, is a non-subscription, non-commercial SIG-type publication. These latest three booklets are obtainable by mail order direct from Ian Baker at a very affordable (Australian) \$45.00 for the set of three, air mailed. Payment must accompany the order. An order form (including alternative payment details in

other currencies) mailed upon request. Ian K. Baker, 31A Mercer St., Queenscliff, VIC. 3225, Australia. AHCB booklets are also stocked by several specialist bookshops & hobby shops in Australia and overseas. Find them on the Internet: USA: M&Models (Illinois); UK & Europe: Mushroom Model Publications (Herts.); NZ: NZ Models (Invercargill); and in Australia: Aeroworks, Hyland's Bookshop, Just Planes, Military Melbourne, Platypus Publications, Red Roo, and Snowy Mountain Models."



#61 (24 pages) "RNAS & RFC National Insignia & Serials 1914-1916" 4½ pages including 3 photos and 2 profile drawings (Avro 504 & BE2c). "Early RNAS Colours & Markings 1914-1916" 5½ pages including 5 2-view drawings [BE2a (2), Avro 504, Sopwith 807, & Sopwith Two-Seat Scout]. "Henschel Hs 123A-1, Chinese Air Force 1938" a 5-page discussion of an unusual color scheme including 3 photos. [Ed: This is a follow up on Ian's comments in AHCB #60 on a SAFO article by Rudolf Höfling. This is a great example of the international cooperation fostered by the SAFCH; with Australia and Austria working together to explore Chinese aviation. Also, many thanks to Ian for the kind words about the SAFO.] "Worth a Look" 4 pages with 8 photos of Chinese aircraft [Gladiator, Fusheng biplane (2), Curtiss Hawk II, Stinson Model O, Vought V-92C Corsair, D-2 single-seat fighter, & General Chu's Pursuit XP-0"].



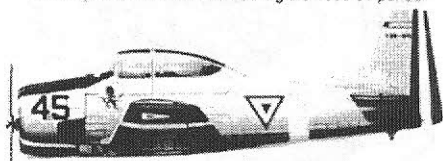
#62 (24 pages) "The RNAS & Gallipoli" 8 page including 6 photos. "Early RNAS Colours & Markings 1914-1916" 10 pages including 7 2-view drawings [Wight A.1, Short 184, Farman HF27, MS Type L, Bristol Scout C (2), & BE2c]. "Worth a Look" 4 pages with 4 photos (Voisin, Felixstowe F3, HP 0/400, & Short 184) and polar plot (lift coefficient vs. angle of attack) for the biconvex aerofoil.



#63 (24 pages) "PC-12, PC-10 & the Beginnings of Camouflage" 17 pages including 14 photos and 8 2-view drawings [Nieuport 10 (2) & 12 (2); DH 4 (2); and Sopwith Triplane (2)]. "Principle Published References" one page. "Colour Notes" 3 pages.

[Editor's Note: The following reviews are of All Scale Decal produced by SAFCH member Ron Ferryra. (All Scale Decals, c/o Ron Ferryra, 757 Emory St. #106, Imperial Beach, CA 92032, USA. E-mail: [allscalemodels@yahoo.com](mailto:allscalemodels@yahoo.com).) These decals are available either from All Scale Decals or from the SAFCH Sales Service. For those decals marked \$4.00 add \$1.00 for postage in the USA, all others add \$2.00. For those decals marked \$2.00 add \$0.50 for postage in USA, all other add \$1.00.

México purchased 30 T-28A's during the 1960-61 period

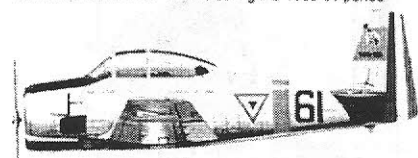


T-28A, No. 201 Sqn., Mexican Air Force; Cozumel A.F.B., Quintana Roo, México

**T-28A, No. 201 Sqn., Mexican Air Force,** Cozumel AFB, Quintana, Mexico. 1/72-scale decals. \$4.00.

This is one of two All Scale Decals for Mexican T-28A Trojans. The 128-mm by 72-mm sheet provides all the national insignia (including tail stripes) for aircraft 'T-28-945' as well as squadron insignia, yellow fuselage and wing bands, black numbers '45', and yellow vertical fin with s/n. Also provided are the black antiglare panel and exhaust covers. The small instruction sheet includes a color profile drawing and a b&w perspective view showing the placement of the decals. \$4.00.

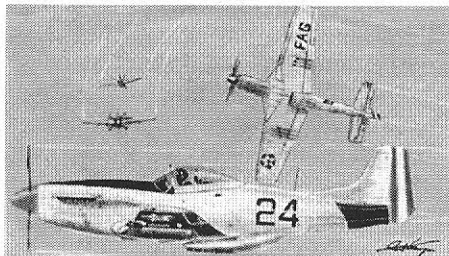
México purchased 30 T-28A's during the 1960-61 period



T-28A, No. 207 Sqn., 1st Air Group, Mexican Force; Ixtapex A.F.B.

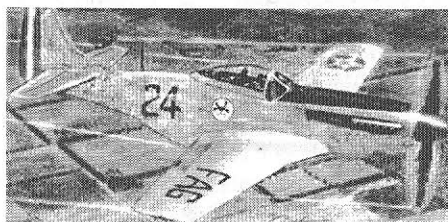
**T-28A, No. 207 Sqn., 1st Air Group,** Mexican Forces, Ixtapex AFB, Oaxaca, Mexico. 1/72-scale decals. \$4.00.

This set is very similar to that described above, with the 142-mm by 66 mm sheet providing national insignia (including rudder stripes), orange fuselage and wing bands, orange vertical tail with serial 'T-28-951' and squadron insignia, black numbers '61', and black anti-glare panel and exhaust covers. The small instruction sheet includes a color profile drawing and a b&w perspective view showing the placement of the decals. \$4.00.



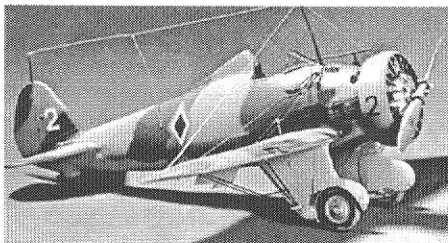
**P-51D, Guatemala Air Force.** 1/48-scale decals. \$4.00.

The 123-mm by 70-mm decal sheet for a 1/48-scale Guatemalan Mustang include the national insignia, rudder stripes, and squadron insignia. Two small sheets provide the black 'FAG' for the wings and black number '24' for the fuselage. The small instruction sheet includes color profile and underside view drawings and a b&w perspective view showing the placement of the decals.



**P-51D, Guatemala Air Force.** 1/72-scale decals. \$4.00.

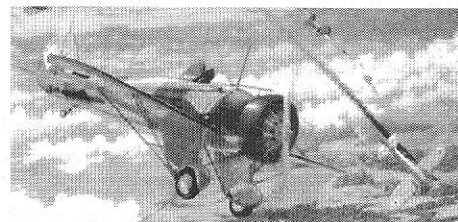
This 1/72-scale sheet is identical to that described above, only smaller. The instruction sheet consists of a color and a b&w perspective drawing.



**P-26A, Philippines Army Air Corps.** 1/72-scale decals. \$2.00.

This, and the decals described below, provide the marking for two camouflaged Philippines Army Air Corps P-26 Peashooters. The small decal sheet (50-mm by 20-mm) provides 6 national insignia (blue/white/blue diamonds), a/c numbers '2' (a pair in white a pair in black), and a red fuselage band. The instruction sheet consists of a color and a b&w perspective drawing.

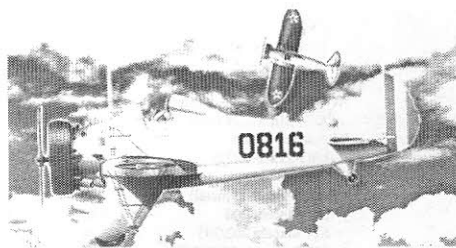
The camouflage schemes for the Philippines P-26 have been quite controversial. Ron Ferryra has chosen a scheme consisting of dark brown and tan upper surfaces with light grey lower surfaces. The modeler will have to match the tan with the background color that is part of the "2"s.



**P-26A, Philippines Army Air Corps.** 1/72-scale decals. All Scale Decal, c/o Ron Ferryra (SAFCH #482), 757 Emory St. #106, Imperial Beach, CA 92032, USA. E-mail: [allscalemodels@yahoo.com](mailto:allscalemodels@yahoo.com).

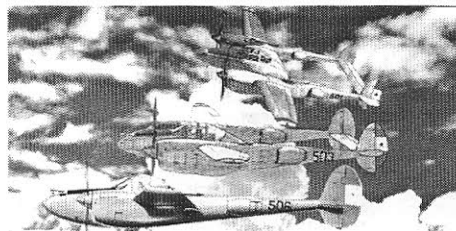
This set is almost identical to that described above, except the a/c number is '306' and the upper surface camouflage colors are dark green and light green. The modeler will have to match the light green background of the a/c number. Oh yes, and the cowl is blue.

This decal is available from the All Scale Decals or the SAFCH Sales Service for \$2.00 plus postage \$1.00 in US; others \$2.00.



**Guatemalan Air Force P-26A Peashooter.** 1/72-scale decals. \$2.00.

A small sheet (70 mm by 45 mm) contains the national insignia and rudder stripes, and two serials '0816' and '0672'. The national insignia for the upper surface of the wing in printwts on a green background matching the color of the wing. The instructions consist of a drawing of '0672' and a color side view of '0816'.



**Honduran P-38L Lightning.** 1/72-scale decals. \$2.00.

A small sheet (80 mm by 35 mm) contains blue/white/blue stripes (with blue star on the white stripe) for the rudder (out side only) and wing tips. The instruction sheet had a color drawing and a photo showing the placement of the decals.



**Argentine F4U-5 Corsair.** 1/48-scale decals. \$4.00.

This set is for a Carsair day fighter in overall light gull grey. Here are two sheets: One (45 mm by 100 mm) consists of four black anchors. The other (140 mm by 70 mm) has the rudder and tail blue/white/blue stripes (with yellow sun on the white rudder stripe), the serials '2-A-222', the inscription for the cowl 'Marina de Guerra 222', and the oval

"reefed anchor and sun" naval insignia. The instruction sheet has a color photo and a drawings showing then placement of the decals.



**Argentine F4U-5N.** 1/48-scale decals.. \$4.00.

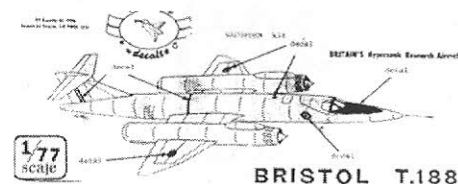
This set is for a Corsair night fighter in overall dark sea-blue. The decals consists of two large sheets (100 mm by 110 mm). One has the rudder and tail blue/white/blue stripes (with yellow sun on the white rudder stripe). The other has four white anchors for the wings, white serials '3-A-209', white 'Amrada 209' for the cowl, the squadron insignia, and the naval roundel consisting of yellow sun, reefed anchor, and inscription 'Republica de Argentina Armada'. Inexplicably missing are the small serials located on the fuselage below the horizontal tail. The latter sheet is printed on a dark sea-blue background matching the color of the aircraft, thereby eliminating the need to cut around the anchor and serial numbers. But, this does require a careful matching of the paint to the background of the decals. The instruction sheet consists a color photo and a drawings showing the placement of the decals.



**Venezuelan Canberra.** 1/100-scale decals. \$2.00.

In keeping with All Scale Decals dedication to collectors of vintage kits, these decals are for the 1/100 scale IM/Kader/Lincoln kit. The small sheet (75 mm by 45 mm) contains national insignia, one large 'FAV', and serials for two a/c (one camouflaged and the other bare metal). The instruction sheet consists of a photo of each version and

color side, top, and bottom views of the camouflage a/c.



**Bristol T-188.** 1/77-scale decals. \$2.00.

Many years ago, a vacuform kit of the British Bristol T.188 experimental aircraft was released by Armalo in the odd scale of 1/77. This kit did not include decals. All Scale Decals remedies this with two small (55 mm by 45 mm) sheets containing the RAF roundels, fin flashes, serials 'XF923', and assorted smaller markings. The instruction sheet has top and bottom views showing the placement of the decals.

"We are currently working on 1/72 decals for both Argentine Corsairs day and night fighters. Also in preparation: Hawk 75 Norwegian, P-47 Mexican light grey w/blue band, and olive green w/yellow band, Estonian Hawker Hart floatplane, Peruvians Sukhoi Su-22A and Su-22UM , and Cuban Mig-23MF and Mig 17 all in 1/72 scale. And in 1/144 scale, an Argentine C-130 in Antarctic colors.

"For possible future decals, we are looking for photos for the following Honduras AF aircraft: Stearman, Ryan ST Special, Northrop F-5E Tiger II. NA Texan, T-28 Tojan, Fiat F-86K, NA F-86F Sabre, Martin B-26 Marauder, Grumman JRF Goose, Fairchild C-82A Packet, Ercoupe 415 CD, Embraer Tucano, Dassault Super Mystere B.2, Bell P-63 Kingcobra, Cessna A-37B Dragonfly. Curtiss C-46 Commando, Beech B-17C Staggerwing, Beech AT-11 Bombardier and Kansas, C-45 Expeditor, IAI 1123 Westwind, and AC 690B Commander/AC1000 Commander.

"Also we would like photos of the Argentine NC900 (Fw-190A) Argentina AF - also for the French AF!"

Ron Ferryra (SAFCH #482), 757 Emory St. #106, Imperial Beach, CA 92032, USA.



Please send items marked below to

Name \_\_\_\_\_

SAFCH # \_\_\_\_\_

Address \_\_\_\_\_

E-Mail Address \_\_\_\_\_

Total cost of items ordered \$ \_\_\_\_\_

Add \$2.00 if one or more  
kits are ordered

\$ \_\_\_\_\_

Non USA members add 20%  
for extra postage

\$ \_\_\_\_\_

Add \$0.41 (US) or \$0.90 (others)  
for notification of non-availability  
(if desired)

\$ \_\_\_\_\_

Total amount enclosed \$ \_\_\_\_\_

\*\*\* Indicates items not included in the 20%-off sale.

This is a partial list. The other pages will follow in  
subsequent issues of SAFO. For the complete Sales  
List, either e-mail a request, or send \$1.00 for snail  
mail delivery.

<b>KITS (1/32)</b>	
HASEGAWA	
Me 163B	20.00
<b>KITS (1/48)</b>	
HAWK	
Nieuport 17	5.00
ICM Ukraine	
Yak-9	5.00
MODAVIA	
Sukhoi Su-1 (1/60)	8.00
Yak-9	10.00
Bell Iroquois	6.00
Mil Mi-2 (1/50)	6.00
OEZ	
Su-25K	9.00
Su-7	9.00
PIONEER	
BaE Hawk MkIA	4.00
SIAT 223 Flamingo	6.00
SMER	
Bristol Bulldog	5.00
Avia BH-11	5.00
Albatros D-III	5.00
SE-5A	5.00
SPOJNIA	
RWD-8	10.00
<b>KITS (1/72)</b>	
AGA (Poland)	
F-84G Thunderjet	6.00
AMODEL (Russia)	
Bf 109Z	10.00
FoSK 199	10.00
7208 I-153	8.00
I-16 5/6	8.00
Pitts S2A	8.00
Su-26M	8.00
T-6 Texan	8.00
AIR KITS (Russian)	
MiG-3	7.00
CIS	
Yak-6	6.00
La-7	6.00
Bi-1	6.00
LaGG-3	6.00
MiG-21STM	6.00
Po-2	6.00
COLLECTION HOBBI (Russian)	
La-15	7.00
La-5	7.00
CONDOR (Ukraine)	
7203 MiG-21UM	10.00
FUJIMI	
HASEGAWA	
Hurricane Yugoslav	9.00
F-104G Norway	14.00
HOBBI KIT (Russian)	
Yak-3 (ex Heller)	6.00
KAYUK (Russian)	
R-1	6.00
KP (Czech)	
La-5NF	5.00

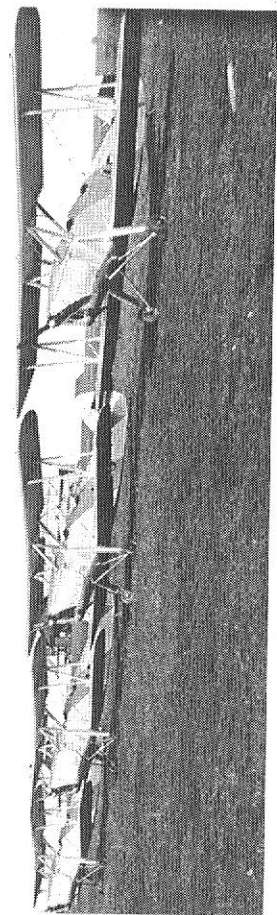
La-7	5.00
Avia C-2 (Ar-96)	5.00
Avia B-22 (II-10)	5.00
Avia B-21	5.00
L-39 Albatros	5.00
Su-7	7.00
Su-25	7.00
Aero C-3A	7.00
MAQUETTE (Russia)	
Il Ya Muromets	12.00
MICRO (Poland)	
LWS Czapl	6.00
PZL P-11c	6.00
MPM	
Focke Wulf Fw 189 V6	12.00
NAKOTNE (Latvia)	
I-3	7.00
I-4	7.00
Su-27	10.00
Su-30/MK	12.00
Su-35	12.00
NOVO (Russia)	
EE Lightning	9.00
F-82 Twin Mustang	9.00
Beaufort	9.00
Sea Venom	8.00
Marauder	8.00
Jaguar	8.00
F-4K/M Phantom	8.00
Beaufighter	8.00
Shark	8.00
Avenger	8.00
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P-61 Black Widow	7.00
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Westland Lynx	6.00
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P-38 Lightning	6.00
Mirage III	6.00
Hunter FGA.9	6.00
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Ryan NPY	5.00
Vengeance	5.00
Spitfire 8/9	5.00
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Northrop F-5	5.00
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Gloster Whittle	5.00
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Seahawk	5.00
Sea Fury	5.00
Spitfire I/V	3.00
PIONEER (Turkey)	
NA F-86E Sabre	6.00
Spitfire Vc	6.00
GD F-16	6.00
NA F-100C	6.00
Northrop F-5B	6.00
Hawker Sea Fury	6.00
Hawker Sea Fury T-20	6.00
Beech C-45	6.00
Sukhoi Su-21G	6.00
PLASTYK	
Su-22UM-3K	12.00
PZW (Poland)	
RWD-8	6.00
Bocian (glider)	3.00
Mucha (glider)	3.00
RPM (Poland)	
Be-4 (no decals)	6.00
RS Models	
Praga E-39	10.00
9204 AVIA FL.3	14.00
9205 AVIA FL.3	14.00
SKARABEL (Russian)	
MiG-9/9M	8.00
MiG-9UTI	8.00
SMER (Czech)	
MS-230	6.00
Tempest V	6.00
Hurricane IIC	6.00
Il-2 (#0865)	9.00
UNDA (Ukraine)	
Su-9B	8.00
Mi-4	8.00
Su-25UB Frogfoot	8.00
ZTS	
PZL-37A/B	6.00
RWD-5bis	4.00
Il-2m3	5.00
ZVEZDA/ITALERI (Russian)	
7212 Mi-24E	10.00
7213 Mi-24D	10.00
7216 Ka-5010.00	
<b>KITS (1/144)</b>	
AIRFIX	

Boeing 727 (no decals/box)	8.00
<b>KITS (Resin &amp; Vacuform)</b>	
BROPLAN vacuform	
1/48 VL Pory	15.00
1/48 TS-8 Bies	15.00
*** 1/48 PZL P.11b-L	20.00
1/72 Me-26310	10.00
*** 1/72 Ripon (wheels)	20.00
*** 1/72 Heinkel HD24	20.00
*** 1/72 Gloster Gamecock (ski)	20.00
*** CASA C-295M	30.00
CECO Bulgaria (resin)	
1/72 German Glider Bomber	6.00
CHOROSZY MODELBU (1/72 resin)	
A24 CWL WZ-X Jupiter	27.00
A25 PZL L-2	27.00
B25 Lublin R-VIII HS	35.00
DAEDALUS (1/72 resin)	
*** J6A/B Jaktflak II	30.00
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DUBENA Vacuform (1/72)	
LaGG-3	6.00
LaG-5	6.00
Jak-15	6.00
Jak-17	6.00
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EMB-110 Bandeirante	11.00
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La-5FN	9.50
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PZL-130 Orlik	6.00
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Harrier GR.3	6.00
Yak-38	6.00
Miniplast (vacuform)	
PZL P-43 Sum (1/48)	6.00
MPM (vacuform/resin)	
Avia B.35 (1/48)	9.00
Avia Av.135 (1/48)	9.00
Suchoj Su-9 (1/72)	10.00
Polikarpov R-5 (1/72)	10.00
MPM/KARO (vacuform/resin)	
Avia B.534 (1/48)	10.00
REFEX Vacuform (1/72)	
LaGG-3	6.00
RUSSIA Vacuform (1/72)	
Il-4	10.00
Yak-4	10.00
Ju-87B	8.00
Bf-109F	6.00
Su-6	8.00
MiG-9	6.00
Yak-9	6.00
P-63	6.00
MiG-3	6.00
La-15	6.00
SIERRA Vacuform (1/48)	
Nieuport 11	10.00
WAKU Vacuform (1/72)	
Jak-15	6.00
Yak-17	6.00
Yak-11	6.00
P-40M	6.00
<b>CARD MODELS</b>	
MATY MODELARZ (1/25 - card)	
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Zlin 24M	5.00
SZD-31 Zefir 4 (Glider)	5.00
RWD-13	5.00
RWD-17	5.00
MATY MODELARZ (1/33 - card)	
LaGG-3	5.00
Mosquito	6.00
PZL-106A Kruk	5.00
MC-200 Saeta	5.00
MATY MODELARZ (1/50 - card)	
Il-28	5.00
Walrus	5.00
Wellington	6.00
MiG-25	5.00
MATY MODELARZ (ship - card)	
Kuter Torpedowy	5.00
Smok (man-o-war)	5.00
Burza (destroyer)	5.00
Orzel (submarine)	5.00
Zawisza Czarny (sailboat)	5.00
Rodney	5.00
Santa Maria	5.00
RUSSIAN CARD MODEL (1/32)	

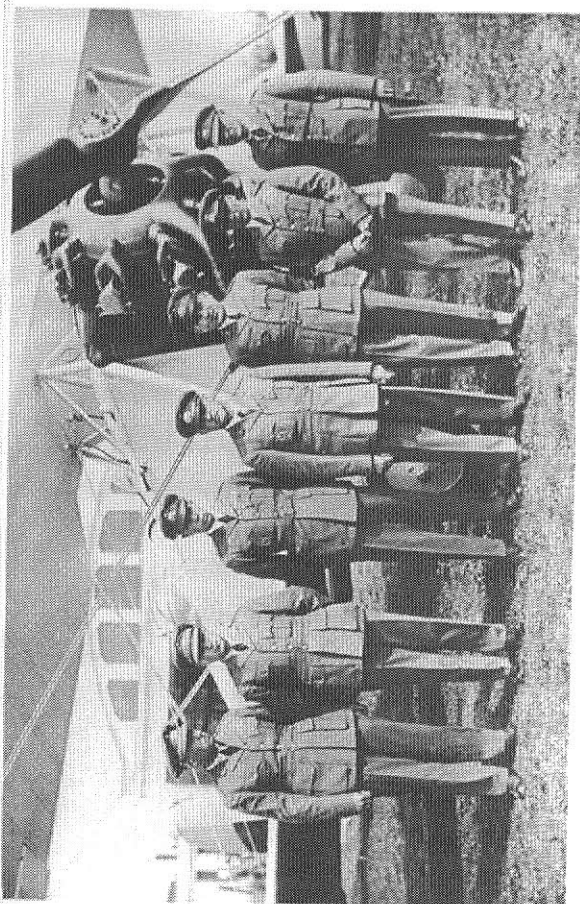
La-5	5.00
Il-10 (w/plastic parts)	8.00
<b>ACCESSORIES</b>	
ACE Ukraine (etched brass)	
7209 Mil Mi-24 Hind	7.00
KP (etched metal)	
MiG-21MF (1/72)	6.00
OZ MODS	
RCR (1/72 etched metal)	
S05 Macchi 200	9.00
S11 Macchi 202/205	9.00
S12 Reggiane 2000/2005	9.00
RED ROO MODELS	
1/48 TA-4G Skyhawk	7.00
1/48 F2A-3/339 conversion	4.00
RUSSIAN WEAPONS (1/72)	
B001 SPPU-22-01 Cannon Pod	2.00
B002 H-31A/P Missile	3.00
B003 H-25MR/MT Millite	3.00
B004 H-25ML/MP Missile	3.00
B005 UB-32M/57 Rocket Pod	2.00
B006 UB-16/57U Rocket Pod	2.00
B007 B-13 Rocket Pod	2.00
B009 H-29L Air-Ground Missile	3.00
B012 R-60 Air-Air Missile	2.00
B014 UPK-23-250 Cannon Pod	2.00
B016 S-25L Air-Ground Rocket	2.50
B018 K-36 Ejection Seat	2.00
WARRIOR (1/48)	
MiG-21 Seat & Instrument Panel	5.00
ZLINEK Russian Weapons (1/72)	
V002 Ch-31A/P + AKU-58E	2.00
<b>DECALS</b>	
ABT	
*** French Lyander (1/48)	4.00
*** France 33 <sup>e</sup> Escadre (1/72)	5.00
AERO Poland (1/72)	
F6F Hellcat	3.00
F4U Corsair	3.00
TBF Avenger	3.00
P-38 Lightning	3.00
P-61 Black Widow	3.00
P-47D Thunderbolt	3.00
AEROPHILE SERVICE	
*** Romania Bf 109 (1/48)	5.00
*** P-38 "Yippee" (1/48)	5.00
ALLIANCE	
RNZAF UH-1D (1/48)	5.50
RNZAF Arctic Choppers (1/48)	5.00
RAAF F-4E Phantom (1/48)	6.25
RAAF MB-326 (1/48)	9.25
RAAF MB-326 (1/72)	7.50
ALL SCALE DECALS (1/72)	
*** Argentine Navy Skyhawk (1/50)	4.00
*** Argentine Navy Skyhawk	4.00
*** Argentine AF Mentor	4.00
*** Mexican Navy Kingfisher	4.00
*** Mexican AF Kingfisher	4.00
*** Mexican T-28 201 Sqd.	4.00
*** Mexican T-28 207 Sqd.	4.00
*** Guatemalan P-51D (1/48)	4.00
*** Argentine F4U-5 (day fighter)	4.00
*** Argentine F4U-5N (night fighter)	4.00
*** Bristol T-188 (1/77)	2.00
*** Venezuelan Canberra (1/100)	2.00
*** Guatemalan P-51D	2.00
*** Guatemalan P-26	2.00
*** Honduran P-38L	2.00
*** Philippines P-26 (brown/tan)	2.00
*** Philippines P-26 (2-tone green)	2.00
AUSSIE DECALS	
35-005 Blackhawk & Kiowa	4.50
32-005 Hornet	2.25
48-020 F-111G	6.25
48-021 Hornet (Magpie update)	1.75
48-022 F-111C & G	4.00
48-023 F-111G	4.00
72-006 Hornet	5.25
72-017 Spitfire	5.25
72-022 C-130A/E (4 sheets)	10.75
72-028 F-111C & G	6.00
72-029 Hornet (Magpie update)	1.74
<b>AUSTRALIAN MILITARY MODELS</b>	
Lanc. Dambuster L (w/ resin)	6.00
Lanc. Dambuster N (w/resin)	6.00
<b>ANDEAN DECALS</b>	
*** 72-01 Ecuador AT-33	7.00
*** 72-02 Ecuador A-37	3.00
*** 72-3 Ecuador Canberra	7.00
*** Ecuador Kfir	7.00
*** 72-05 Ecuador Mirage F1	7.00
*** 71-06 Latin T-34CB/C	7.00
AZTLAN Mexico	
48/2 FAM P-47D	6.00
72/2 FAM P-47D (new)	5.00
72/2 FAM P-47D (Green)	2.50
72/3 FAM P-47D (Grey)	2.50
72/9 FAM Kingfisher (wheels)	3.00
72/13 FAM AT-6	3.00
72/15 FAM AT-6	4.00



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